THE

MEDICAL AND SURGICAL REPORTER.

No. 1573.] PHILADELPHIA, APRIL 23, 1887. [Vol. LVI.—No. 17.

Original Department.

Lecture.

DOUBLE DISEASE OF THE AORTIC VALVES—CARDIAC INCOMPETENCY.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM PEPPER, M. D., LL. D.,

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Reported by William H. Morrison, M. D.

Gentlemen: I wish to call your attention to-day to a chronic form of cardiac disease. This man is fifty-two years of age, a resident of this city, and an engineer by occupation. He came to the hospital three weeks ago. His parents died of old age, and his brothers and sisters are all living and in good health. He had the ordinary diseases of childhood, and at the age of sixteen had small-pox. He states that when a young man he had a chancre and also gonorrhœa. He is married, and is the father of sixteen children, eight of whom are living. For five or six years he was accustomed to run foot-races, taxing himself in this way very severely. When the war broke out he enlisted and served four years. He received some wounds and had camp diarrhœa. After the war he became an engineer. About this time he was struck on the head and received a compound, depressed fracture of the skull, for which he was trephined, and made a good recovery, the only disagreeable effect left being slight impairment of the memory. Two years ago he discharged a lumbricoid worm by the mouth. In May, his left shoulder was dislocated. About one year ago, shortness of breath with a burning pain behind the sternum was noticed.

The history, then, is one of great exposure and severe exertion. The man has been accustomed to drive himself, so that he was constantly under a strain, and this was particularly the case when he was running so many foot-races. I refer especially to this, as it may have a possible bearing upon the condition which has since developed. He began two years ago to suffer with dyspepsia, and while in this condition, with weakness and shortness of breath on exertion, he went to work in a deep mine, running a pumping engine, and for four months was almost constantly wet to the skin. The pain, shortness of breath, and dyspepsia grew worse, and he was compelled to give up the work. The attacks were violent and were brought on by exertion. At times these attacks of pain in the sternal region would occur as often as four or five times a day. He has done no work for the past six months. The attacks have continued to recur with increasing severity, and he has been compelled to stand for five or six hours at a time in order to relieve the pain. Swelling of the hands and feet was first noticed four months ago. Since then œdema has appeared on several occasions, but has not continued. Two months ago he came to this city, and was admitted to another hospital. There was at that time expectoration of blood-tinged mucus and marked shortness of breath. Under treatment, he improved and left the hospital, but again growing worse, came to this institution two weeks ago. The attacks of pain seemed to come on without any exertion. While they often occur when he is careful in regard

to his diet, they are distinctly worse when he is imprudent. The pain is felt to the left of the sternum, but it never goes up to the shoulder or down the left arm. The spells of pain have been distinctly præcordial.

He has a well-made chest. On percussion, the resonance is good. On auscultation there is no marked change in the breath sounds. The pulse is 80 per minute, regular, with a sharp rise and a quick fall. The sphygmographic tracing of the pulse taken yesterday, shows that the line of ascent is sharp, the summit is almost normal, but the fall is abrupt and the secondary rise resulting from the closure of the aortic valves is almost entirely wanting. There is visible pulsation in the arteries of the neck. The apex beat of the heart is very diffused, it extends outside of the nipple line and as far down as the seventh rib. The impulse is distinctly transmitted to the epigastrium. There is no prominence of the præcordium. Palpation shows that the impulse is diffused, but not powerfully. Percussion shows enlargement of the area of superficial dullness in a direction downward and to the left. On deep percussion the cardiac dullness is found to extend one inch outside of the nipple line and below the normal position. It does not extend above the third interspace, and does not extend beyond the median line of the sternum. There is, apparently, no dilatation of the auricles, and very little affection of the right ventricle. There is marked enlargement only of the left ventricle.

On auscultation at the base of the heart a strong double murmur is heard. The two elements are almost alike, sounding like the whispered "who," but the diastolic murmur is the stronger. Tracing these to the body of the heart and the apex, they lose in force rapidly, and at the apex a new murmur is heard quite distinctly. This would indicate that the murmurs heard at the base originate at the aortic orifice. In time, the murmur heard at the apex is systolic, high-pitched, and shrill, totally differing in quality from those heard at the base. It is carried into the axilla and is audible at the angle of the left scapula. This murmur is due chiefly to mitral regurgitation. The diastolic murmur is also heard at the point of the heart, and is slightly audible toward the axilla. There is no reason to think that there is any mitral stenosis, for the diastolic element at the apex is like that at the base. The point of greatest intensity of the basic murmurs is mid-sternum, opposite the second interspace and at the junction of the second costal cartilage with the sternum. The line of greatest transmission is upwards and to the right. The murmurs are heard in the carotid arteries, where the two murmurs, as is usual, unite in one. They are also heard in the subclavian arteries. The diastolic murmur is heard as low as the xiphoid cartilage. These are perfect illustrations of aortic murmurs. Pursuing the murmurs down the sternum, we find that the diastolic murmur is most strongly carried, but that the systolic murmur is also heard. We have then aortic stenosis with aortic insufficiency.

We shall consider the exact condition induced by these lesions, the exact condition of the aorta and of the arteries, and the nature of the process that has brought about these lesions. As a result of the aortic stenosis, the left ventricle is compelled to act with unusual force to overcome the obstruction. Increased force is also required to overcome the mitral leakage. The compensatory hypertrophy has not been perfect, and the circulation is not well kept up. We have not a powerful impulse. Although the area of the impulse is increased, its force is not considerable. As a result, there has been œdema of the feet. The dyspnœa is due to want of proper force in the pulmonary circulation. The pain which is experienced on excitement or exertion is the pain of cardiac incompetency. These pains are not only proof of the cardiac incompetency, but they are connected with a special condition of the nerves and ganglia of the heart. They are significant of want of proper compensation. We know, therefore, that this man has dilated hypertrophy of the left ventricle, without sufficiently increased strength of the walls of the heart to fully compensate for the effects of these lesions. Fortunately he has not had such serious trouble in the lung as to cause damming back of the blood upon the right cavities of the heart, thus inducing dilatation of the right ventricle. The only suggestive thing in that direction is the pulsation below the xiphoid cartilage. This, however, is not sufficient to indicate much dilatation of the right ventricle. As the area of cardiac dulness does not extend much beyond the right edge of the sternum, and as there is no distension of the jugular veins, showing that they have no difficulty in pouring their blood into the right auricle, we may infer that the right cavities have not suffered to any marked extent, but that the lesions are confined chiefly to the left cavities, and especially to the left ventricle.

The next point is in reference to the exact condition of the aortic valve, and to the

condition of the aorta; whether there is disease of its walls or whether there is dilatation. We observe that here is visible pulsation of the subclavian and carotid arteries, and the fingers placed upon these vessels receive a strong impulse, suggesting that they are dilated. The arch of the aorta is not dilated sufficiently to force itself to the surface and enable us to recognize it by an increased dullness. It is well covered by the lungs, which appear to be somewhat emphysematous, and this may serve to explain some of the dyspnœa. We are not able to positively determine that there is dilatation of the aortic arch. The radial arteries are distinctly large and bard. If the arteries at a distance from the heart present decided changes, we may be sure that those near the heart are similarly affected. The strength of the murmur as heard over the course of the aorta suggests very forcibly that the lining of the aorta is roughened with patches of atheroma.

It is a difficult question to decide the exact cause of the cardiac and arterial changes in this case. It is to be noted that despite the many conditions which the man has presented, he has never had rheumatism, nor is there any evidence that the cardiac disease began with any acute constitutional process. It is in all probability a chronic local trouble, and this man has been subjected to several causes which would be likely to induce disease of the heart and of the arteries. In the first place, there is a possibility of syphilis. Although the man appears to have presented no secondary lesions of this affection, yet we cannot exclude it in considering the causation of this trouble—for syphilis is a fruitful cause of disease of the arterial walls and of the cardiac valves. In addition to this, he has led a life of severe muscular exertion, conjoined with extreme exposure to hardship, damp and bad hygienic conditions; all of these things are calculated to strain the arterial coats and set on foot irritation and a low grade of disease which would run into chronic endarteritis and chronic valvulitis. Whether the conditions present are the result of syphilis or whether they come from slow, degenerative changes, probably dating back many years, we cannot say. This case serves to illustrate the way in which cardiac disease often develops in persons who have led lives of exertion and exposure. We are to note that in this case, unlike those which arise acutely, where the mitral valve is more likely to be affected, it is especially the aortic valves and the arterial coats which are involved. The mitral lesion may be purely secondary, resulting from the stretching of the ventricle until the auriculoventricular orifice is so much dilated that the valves are not able to close it.

Where there is this extensive change in the coats of the artery, it often happens that we find that the arteries of the kidneys suffer, that the interstitial tissue of the kidney undergoes irritative changes, and that the organs pass into a condition of sclerosis, with thickening of the interstitial tissue, thickening of the arterial tunics, changes in the blood-pressure and œdema, and associated with these, changes in the epithelial lining of the tubules, although this is often absent. Examination of the urine in the present instance, shows that its quantity varies from sixty to eighty ounces, the specific gravity has been from 1012 to 1020, it contains a trace of albumen, and the microscope shows a few hyaline and faintly granular casts. This man has a certain degree of contracted granular kidney, and this condition is often associated with this type of aortic and arterial diseases.

Examination of the eyes shows atrophy of the optic discs. The vessels are small, and there are patches of pigment indicating that the arterial coats have been involved, and that there is a tendency to irritative changes in the fibrous tissue leading to contraction and pressure upon the enclosed structures and interference with nutrition.

I shall next speak with reference to the prognosis and treatment. The changes have advanced so far, that a cure of course is impossible. The man must lead a life strictly adapted to the organic changes present. He must avoid excitement, excesses, and sudden exertion. The dilated heart needs strychnia and digitalis. The diseased arteries should be treated with iodide of potassium, and on account of the possible syphilitic element, mercurials should be used from time to time. The diet must be regulated. In order to relieve the attacks of pain, nitro-glycerine or nitrite of amyl should be employed. Under favorable conditions, with such a course of treatment, we can not put any limit to the time that this man may live, and live comfortably. This is a most chronic process, and years may pass and the man be as well as he is now. Œdema will come and go, and attacks of threatened cardiac failure will appear, but this may be overcome by a stimulating and tonic treatment. If, however, he exposes himself, contracts cold, and exhausts the heart, the compensation which is now imperfect may be broken, and the man may hasten his end to any ex-

tent. His life depends upon the care with which he pursues the plan of treatment which has been indicated.

COMMUNICATIONS.

INJURIOUS INFLUENCES CAUSING DEAFNESS.

BY LAURENCE TURNBULL, M. D.,
Of Philadelphia.

The following may be mentioned as the most prominent causes:

Alternate heat and cold, when suddenly applied to the ear, are very injurious, and these alternations of temperature, combined with dampness, produce what is termed an influenza, or common cold, or cold in the head, which is sure to produce inflammation in the ear, and the repetition of this same cold alternately produces a diseased condition of the ears, which, by its alternations of tissue, both of the receptive, mechanical, and nervous apparatus, terminate in a form of acoustic deafness, the most prevalent and difficult to cure, or even relieve, unless seen in its very early stage.* There are also diseases of the auditory nerve of hearing, which will readily be understood from the character of the nerve of the ear, as reflex irritation and inflammation from various diseases, hemorrhagic inflammation of the cochlea, hemorrhagic inflammation of the labyrinth in children, primary acute purulent inflammation of the labyrinth resulting in meningitis, otitis labyrinthica, acute inflammation of the membranous labyrinth, cerebro-spinal meningitis, disease of the auditory nerve and its terminal parts, syphilitic disease of the labyrinth, traumatism involving the internal ear, atrophy of the labyrinth, changes in the auditory nerve from typhoid, scarlet, and other fever, also from variola, diphtheria, and mumps. It may also be comprehended how deafness can be an inheritance through a diseased father and mother. Yet the deafness which is charged to this cause is not as frequent as we would be led to suppose by the imperfect statistics of our institution for the instruction of deaf-mutes. A large number of cases of loss of hearing are developed during the period of infancy, when changes in the organs of hearing may occur, the result of colds, measles, whooping-cough, scarlet fever, and cerebro-spinal meningitis. The ear is so apt to be overlooked in the great anxiety for the life of the child. When the crisis is over, then the poor, damaged ear is perhaps examined, only to find the child profoundly deaf. No one can fully understand the importance of hearing, both for social intercourse and educational development, until some dear one has lost it. It is an important matter that obstetricians and nurses should be carefully taught some knowledge of the anatomy and pathology of the ear, as the deafness of many of the so-called congenital deaf-mutes is the result of mucous, cheesy matter or blood in their meatus or in the tympanic cavity at birth. Another cause is physicians not attending in time to catarrhal deafness, the result of cold from exposure or teething. The nurse is often at fault in placing the ears of the infant in draughts of cold air, and allowing cold water to enter the meatus, and pass back to the membrane, lodging there and causing acute inflammation, shown by intense pain and persistent earache, not relieved until perforation of the drum-membrane takes place or extension to the internal ear or brain.*

It has already been shown that there are two distinct ways of hearing—one by the transmission of vibrations of air through the tympanum, ossicles, fluid in the internal ear to the nerves; the other by a similar transmission of vibrations through the bones of the head to the petrous portion of the temporal bone, and finally reaching the nerves. The explanation of this is that the waves of sound being propagated in every direction, when they reach the tympanic cavity pass out, in part, through the conducting mechanism of the ear, and whenever this conducting mechanism is in its normal condition, are lost to our perception; if, however, this mechanism offers more resistance than normal, as in acoustic deafness, from immobility due to thickening, calcifications, etc., a part of the sound which normally passes out and is lost is reflected back to the nerve of the ear. Any person can make experiment on themselves in producing acoustic deafness by closing one meatus with the finger, and then testing with the tuning-fork; the closing of the meatus setting up the same sort of resistance as is offered by the calcified or thickened drum membrane. The object of artificial aids of hearing is so to intensify the waves of sound, another way of hearing, that they can overcome the resistance opposed by these diseased conditions. The different forms of ear-trumpets and conversation-tubes are calculated to bring about this

*Imperfect Hearing and the Hygiene of the Ear, 3d ed., p. 99.

*Manual of Diseases of the Ear, 2d ed., p. 444.

intensification of the waves of sound for cases of acoustic deafness. According to the census of 1885, there were in the United States some 35,000 deaf mutes, and but a small part of them were being instructed at all, there being only about twenty-five institutions in the United States in May, 1868. In only eleven is articulation or lip-reading the method employed. These schools contain only 430 pupils out of the 7,801 that are taught the sign language, or combined method.

To be able to mitigate, even in a slight degree, the distressing condition that this form of deafness implies, is to confer an inestimable boon on the sufferer. By the persistent and repeated exertions of one eminently distinguished as a teacher and friend of the deaf in the largest institution for the education of this class in this country, considerable progress has already been made in this direction.*

Twelve cases are reported that have been not only able to hear, but to repeat vowel sounds; and some of these pupils can already carry on quite an extended conversation by the aid of a flexible conversational-tube of special design. This tube is about four feet in length, made of wire wound in concentric circles, incorporated in rubber, around which is woven a mohair covering.

The next mode by which we hear is by what may be termed external touch, and the use of the organ of speech is acquired solely by the aid of the other senses. Sound is, therefore, neither the sole nor the primary element of voice. It is the breath set in motion by the lungs, and reduced to sonorous vibrations by passing through the glottis, which resembles the reed of a musical instrument. It is composed of rapid undulations which pass forward from the glottis, and are reverberated and modified by the organs of speech. The finger-touch of a deaf mute on our glottis can, without any previous instruction, detect these vibrations, and at once he obeys the natural impulse to produce similar vibrations. Arnold† has devoted much careful study to this subject of teaching the deaf mute to speak, stating, as is well known, that children who lose their hearing, soon lose their speech, because touch and its habits are not so fully confirmed, nor is the control of the will over the organs so perfect as in riper years. In all such cases no time should be lost in providing a teacher under whose skillful directions the speech may be kept up to its normal condition.*

* Vide "Aural Development at the New York Institution," by Prof. E. H. Currier, American Annals of the Deaf and Dumb, January, 1885. Also "Hearing and Deafness," by F. C. Reley, pamphlet, p. 9.

† Rev. Thomas Arnold, Principal of Private School for the Deaf, Northampton, England, American Annals Deaf and Dumb, April, 1886, p. 120.

SOLUBLE COMPRESSED HYPODERMIC TABLETS.†

BY H. AUGUSTUS WILSON, M. D.,

Of Philadelphia.

A little over six years ago I called the attention of the profession to soluble compressed tablets for hypodermic use, which I had originated some four months previously, to take the place of prepared solutions and powders, with which I had become dissatisfied.

My first paper on the subject, read before the Philadelphia County Medical Society, in October, 1880, simply called attention to their utility, and I exhibited a single formula to prove the practicability of the method. The various steps taken to obtain a convenient form, the necessary accuracy of dose, and the proper disintegrator, were all stated in my second paper, read before the American Medical Association, May 5, 1881, and it is not necessary to do more than refer to them at this time.

Where an infinitesimal amount of active drug was to be used, such as digitaline, atropia, strychnia, hyoscyamine, and other such active agents, the dose of which is from the one-sixtieth to the one-two-hundredth of a grain, it was found necessary in order to compress them to add an excipient or disintegrator. It was only after a series of very thorough and continued experiments that the sulphate of sodium was adopted for this purpose—a neutral salt, one readily soluble, having no irritating or medicinal action, with which the drug was incorporated when the tablet to be compressed did not contain more than one-twelfth of a grain of the active agent.

The salt has been found to answer every indication. At first its use was advised in all the tablets, but upon further experience and the wonderful advances and improvements in the mechanical appliances, I found it unnecessary, except as stated above, where the active agent is less than one-twelfth of a grain. The morphia salts, which are more largely used than any other in hypodermic medication, gave some trouble at first, in their tendency to harden if kept for a consider-

* Day School for Deaf Mute Instruction, Manual of Diseases of ahe Ear, 2d Ed., p. 440.

† Read before the College of Physicians, Philadelphia, January 5, 1887.

able length of time. This difficulty, however, has been entirely overcome by improved manipulation and experience in compressing.

A solution is usually accomplished in from fifteen to thirty seconds by the method I usually employ, which is to drop a tablet into a teaspoon containing fifteen or twenty minims of warm water. It is then crushed with the end of the syringe, to which the needle is attached, and drawn up and forced out two or three times by the syringe, when a perfect solution is obtained. I have on my syringe a small cap with a smooth surface fitting on the needle end, which is useful in keeping the syringe in a good condition, and is a most convenient pestle with which to crush the tablet.

Let it be borne in mind, that these tablets are in reality nothing but powders put in a most convenient, accurate, and portable form, and it will be apparent that no special syringe is required.

Any ordinary hypodermic syringe can be used for these tablets, just as readily as for ordinary solutions, whether prepared or made at the time of administration from powders.

I abandoned prepared solutions for hypodermic use because of the penicilium, confervæ, and other low forms of vegetable life, which developing in solutions at the expense of the drug, increase the strength of the solution. Professor Roberts Bartholow, in his work on hypodermic medication, says that the injection of solutions containing these vegetable growths is one of the causes of the hard nodules so often seen. To prevent the formation of these organisms by the addition of such germicides as tartaric, hydrochloric and salicylic acids, is to induce chemical changes in the solutions, and greatly increases the danger of inflammatory deposits at the site of puncture. As, on the other hand, increased strength must be the result of the evaporation of the water, it will be apparent that accuracy of dose is either impossible or very rarely accomplished in the administration of prepared solutions.

In abandoning the use of prepared solutions and adopting powders, I avoided the objectionable features of the former, but could not obtain the desired end of accuracy of dose, as was clearly demonstrated by the accumulation of deposits in the recesses of my pocket-case, due to the sifting of the drug through the interstices of the folded paper. Should moisture gain access to the powder, as it not infrequently does, more or less of the contained drug will dissolve and be absorbed by the paper. The necessity for some other more reliable method became still more apparent, when such drugs as atropine, strychnine, etc., were to be administered in such minute quantities as the $\frac{1}{100}$ or $\frac{1}{150}$ of a grain.

My aim originally was to devise a method by which accuracy of dose might be invariably secured, regardless of the quantity of the drug required, permanence and freedom from change or decomposition, however long on hand, and almost under any circumstances; ready solubility, convenience of administration, and in such a form as to be readily carried on the person.

Since the introduction of this subject to the profession some six years ago, a number of alkaloids have come into general use, and their hypodermic administration is rendered practicable by these tablets. Among them may be mentioned digitaline, cocaine, duboisine, hyoscyamine, picrotoxin, conine, curarine, eserine, physostygmine, caffeine, quinia bimuriatica carbamidata, etc.

The convenience of these soluble compressed hypodermic tablets for hypodermic, ophthalmic, and general use, makes their addition to our armamentarium a decided advantage. These remedies are placed in such convenient form that a physician can carry in a very small pocket case a large number of remedies in their most condensed and active form, ready for use in emergencies, or for the needs of general practice. I have found them extremely convenient in ophthalmic medication, when the method of administering is to insert the desired tablet in the lower conjunctival sac, by drawing down the lower lid. Ordinarily a few minutes at the most are required to dissolve them. No irritation has ever followed or attended their use in my hands, and I am unable to understand how there could be any, for the disintegrator, when any is used, is perfectly non-irritating. They should, in my opinion, be substituted for the bulky changeable solutions in which germicides which would irritate the sensitive conjunctiva are rendered necessary to prevent the growth of minute organisms.

The recent use of some tablets that I have kept for six years clearly demonstrated the fact that their solubility has not been affected in that time.

At the present time the following drugs are prepared:

Morphine, morphine and atropine, atropine, strychnine, apomorphine, pilocarpine, aconitine, morphine bi-mecon., hydrarg. chlor. corros., digitaline, cocaine, caffeine, hyoscyamine, duboisine hydrochlorate, duboisine hydrochlor. and morphine, hyoscyamine sulphate, hyoscyamine sulph. and morphine, picrotoxin, picrotoxin and strychnine, conine

hydrobromate, conine hydrobromate and morphine, curarine sulph., eserine sulph., eserine sulph. and morphine, physostigmine salicylate, quin. carbam. mur.

To sum up, I claim that the advantages of this method over any other known are—

1. The convenient size of the tablets.
2. The immunity from change.
3. Their accuracy of dose.
4. Their certainty and rapidity of action.
5. That they may be used by the mouth, nares, urethra, and rectum.
6. Their adaptability to ophthalmic medication.

SALICYLATE OF HYDRARGIRIUM, AND ITS EMPLOYMENT IN THERAPEUTICS.

BY BRUNO CHAVES, M. D.,

Of the Polyclinica Geral, Rio de Janeiro.

It is with the greatest interest that I contemplate the amazing progress with which, day by day, the great American republic continues to advance on its road to the highest place among civilized nations; and I sincerely regret that there are not closer relations, both commercial and scientific, between that country and the other nations of the American continent, which, more than any other, requires the benefits of American progress.

An ardent admirer of the United States, with which I wish my countrymen to be more intimately connected in every respect, I recently read with much pleasure some valuable scientific articles published in your excellent periodical, the MEDICAL AND SURGICAL REPORTER, a number of which had been kindly lent me by my friend Dr. S. D. Rambo, a citizen of that republic and a conspicuous ornament of the dental profession in this city.

The perusal of these articles excited in me the desire to make known to my professional brethren in the United States some scientific discoveries recently made in Brazil. On my expressing this wish to my friend, Dr. Rambo, he kindly offered to translate my article, and, thus encouraged, I take the liberty of offering you for publication in your valuable periodical a few remarks on the salicylate of hydrargirium and its therapeutic employment, thus contributing towards calling the attention of the profession to a discovery which has proved to be of great utility in medical practice.

In the early part of last year my learned friend, the eminent Prof. Dr. Silva Aranjo, who lectures on cutaneous and syphilitic diseases in the Polyclinica Geral, of this city, received from Dr. Gamberini, of Bologna, Italy, a pamphlet written by this able specialist, in which he treats of the phenate of hydrargirium, and of the success which had attended his experiments with this substance in the treatment of syphilis.

As the syphilis is a parasitical disease, Dr. Gamberini naturally conjectured that the union of two such powerful parasiticides as mercury and phenic acid could not fail to produce a very efficacious remedy. His experiments proved that his conjectures were well founded, for he was very successful in the treatment of syphilis with this mercuial salt.

Prof. Silva Aranjo, for whom I have the honor to be clinical director, kindly allowed me to read the pamphlet of the eminent Italian specialist. In doing so I conceived the idea of causing phenate of mercury to be prepared for our own experiments on *syphilis* and *skin diseases*.

Messrs. Veiga & Delgado, two competent chemists, were intrusted with the preparation of this substance, which in our practice produced results similar to those obtained by Prof. Gamberini.

In a conversation on this subject with Prof. Silva Aranjo, Mr. Delgado suggested the expediency of preparing the salicylate of hydrargirium as well as the phenate; for, as he declared, he had no doubt that the effects of the former would be as satisfactory as those of the latter, and probably still more so. Prof. Silva Aranjo assented, and Mr. Delgado had, I believe, the honor of being the first person to prepare this new salt.

We proceeded, then, under the orders of Prof. Silva Aranjo, to experiment with the salicylate of hydrargirium, administering it in daily doses of 1 milligram (0.0154 grain), which we gradually increased to 25 milligrams (0.385 grain), in pills made of the powder and extract of liquorice. In extreme cases we have given two doses a day.

Our success exceeded our expectations, and from what I have observed I am convinced that the salicylate of mercury will become as essential to therapeutics as the iodide of potassium, calomel, and other useful medicines.

The wonderful results obtained from the employment of this mercurial salt as an internal remedy led us to experiment with its external application (from 50 centigrams to 1 grain of the salicylate of hydrargirium to 30 grams of white vaseline). The success of this experiment was no less striking than that of the internal remedy. We effected cures of syphilitic eruptions and ulcers of a

syphilitic character, which had previously been treated with little or no result with other medicines, including mercurials and iodides, such as ointments of bi-oxide of mercury and iodide of potassium.

We also employed the salicylate of hydrargirium very successfully in urethral injections for gonorrhœa, mixing from 10 to 15 centigrams of the new salt with 200 grams of distilled rose-water, and adding sufficient carbonate of soda or potassium to cause it to dissolve.

Prof. Silva Aranjo, Cr. Carvalho (his substitute), and myself, communicated the result of our combined experiments to a number of physicians of this city, so that salicylate of hydrargirium is now very much used.

I must not neglect to state that Dr. Neves da Rocha and Prof. Moura Brazil have employed this salt so successfully in the collyrium in purulent and even granulous conjunctivitis, as well as in other diseases of the eye, that they prefer it to any other medicine now in use.

These specialists have also been very successful in their experiments with this substance in hypodermic injections on syphilitic patients, their formula being the following; 5 centigrams of salicylate of mercury to 10 grams of distilled water, with sufficient carbonate of potassium to cause it to dissolve.

The effects of this salt are much more rapid and efficacious than any other with a mercurial or iodic base, such as proto-iodide, which is very much used here, bi-iodide, bichloride, phenate and tannate of hydrargirium, as well as the iodides of soda and potassium. It is well received by the stomach, and we saw no instances of mercurial stomatitis, gastritis, or enteritis, resulting from its use.

We have successfully employed salicylate of hydrargirium in the treatment of several cutaneous diseases, such as *marginal eczema of Hebra, circinate pityriasis of Vidal, versicolor pityriasis, parasitic sycosis*, etc., and even *leprosy*, in which we used it internally and externally in connection with gynocardic acid, the active principle of the *oil of gynocordia odorata*.

In an article like this much that is interesting must necessarily be omitted, but before concluding I cannot refrain from referring to the following two cases:

The first is that of a syphilitic patient suffering from an obstinate generalized tuberculous syphilitic eruption, and subject besides to violent rheumatic pains and continuous gonorrhœa.

After experimenting with all the mercurial and iodic remedies usually employed in such cases, and finding them all insufficient, we succeeded in removing the facial eruption by means of the ointment of salicylate of mercury.

The second was a case of syphilitic fungus near the anus, in which it is usual in the hospitals of this city to resort to an operation with the thermo-cautery of Paquelin after giving chloroform to the patient. We, however, succeeded in destroying the fungus by means of an external application of salicylate of hydrargyrium.

In conclusion, I beg to tender my thanks to the editor of the MEDICAL AND SURGICAL REPORTER for the publication of this article, and to Dr. Rambo for kindly translating it.

Rio de Janeiro, February, 1887.

RESUSCITATION OF ASPHYXIATED INFANTS.

BY T. C. SMITH, M. D.,

Of Aurora, Indiana

Dr. E. T. Blackwell, in his brief, practical article in the MEDICAL AND SURGICAL REPORTER of February 19, brings again forward a good method for readily resuscitating an asphyxiated new-born infant, and one that can certainly be done while yet caring for the mother, if she should need immediate attention at that very important moment, which is to her often very critical. Yet, in most cases, the whole attention can be given to the infant if needed. An assistant can place the hand over the uterus and watch the course and conditions of the woman in most cases, while efforts at resuscitation are carried on with the death-threatened infant.

But I write to renew attention to a method brought to notice several years ago, that has served, for me, an excellent purpose in some very obstinate cases of infantile asphyxia. I regret that I do not now remember the one who first brought this method forward. It is very simple. Take the infant by its lower extremities with the left hand, suspend it head downward, then with the right hand embrace the neck posteriorly, using for this purpose the thumb, ring, and little fingers, while the index and middle fingers support the head. Now hold the head and shoulders downward and comparatively still, while with the left hand the body and feet are made to sweep forward and backward from ten to fifteen times or more in a minute, until respiration is established. Each time that the body is bent forward on the face the air is pressed out of the lungs, and when

bent well back again the air enters the lungs freely. Keeping the head downward causes a full supply of blood to be given to the brain. This process does not prevent fanning, or sprinkling suddenly a little cold water on its sides by an assistant if needed for the shock it produces. Cloths wrung out of hot water can also be applied if needed. It is not good practice to lay an asphyxiated infant on its back, for if there is mucus in the mouth or throat this will tend to strangle it. If placed on its side or with the face downward this cannot occur, or, at least, is less liable to do so. If there is enough mucus in the child's throat to cause considerable noise by its rapid succussions in process of respiration, all this will cease in a little time by placing the child face downward, or on its side with the face inclined downward. In this way the mucus will gravitate away from, rather than into, the throat. Of course it can be otherwise removed, but this is an easier and a very ready way to obtain relief from this harassing symptom.

Some have claimed that the Marshall Hall method of artificial respiration will not cause air to enter the lungs of an infant where the respiration has not already been partially established. In the method above recommended, one can readily satisfy himself of the entrance and exit of air into and from the lungs every time the infant's body is well bent forwards or backwards, for the evidences will be unmistakable and easily observed.

Medical Societies.

THE NEW YORK NEUROLOGICAL SOCIETY.

Stated meeting, March 1, 1887. The President, Charles L. Dana, M. D., in the chair.

Presentation of the Cord and Nerves in a Case of Alcohol Paralysis; Multiple Neuritis.

Dr. H. M. Biggs presented the case. Bertha B., aged thirty-five, married, admitted to the hospital, September 20, 1886. History imperfect. Nothing of importance in the history up to the beginning of her present illness, about five weeks before admission, when she began to have sharp, shooting pains in both legs, but more severe in the right. She began to lose power in her limbs, and one week later was unable to walk because her limbs were "too weak." The loss of power seemed to begin in her feet. She complained of pain in her back and weakness when she tried to stand. Later, she began to have pain and lose power in her arms. She says she has been a moderate drinker, and denies syphilis.

On admission, the patient was almost completely paralyzed in lower extremities; could barely raise her limbs from the bed. The muscles of the upper extremities, especially the extensors, were also somewhat affected. There were some spots of hyperæsthesia and partial anæsthesia irregularly distributed over the lower extremities, and also considerable numbness. Sensation in the upper extremities seemed to be normal. The reflexes were lost. There was marked atrophy in the legs and thighs on both sides, particularly of the extensors of the foot, and a moderate amount in the arms. The extensors here were also most affected. She complained of very severe pain in the arms and legs, which kept her awake at night, and there was marked tenderness on pressure. Temperature at 9 a. m., 100°; at 5 p. m., 101.2°; pulse, 9 a. m., 104; at 5 p. m., 112. Urine, 1018; albumen, one-eighth in bulk; no casts.

Two days after admission the patient was found to have a moderate amount of fluid in the right pleural cavity. Twenty-four ounces of serum were withdrawn. She gradually failed, lost strength, emaciated; the pleurisy developed into an empyema, for which a free opening was made in the chest. Before death, which occurred in February, 1887, she had lost all power over both lower extremities, and the arms were partially paralyzed. Atrophy was very marked in both lower extremities and forearms. Pain was constant and paroxysmal, and very severe. Tenderness on pressure and pain on movement of muscles marked. Contraction of the muscles gradually developed until thighs were sharply flexed on trunk, and legs on thighs. Attempts to straighten the limbs caused the most severe pains. The bladder and rectum, the muscles of phonation, deglutition, and respiration, and the nerves of special sense, were entirely unaffected. The reactions of degeneration were present. The patient died of exhaustion resulting from the empyema.

Autopsy.—Patient greatly emaciated. Legs and thighs markedly flexed. Muscles of the leg of a yellow color, and apparently converted almost entirely into fat. Muscles of thigh much less affected. Spinal cord, nerve roots and trunks normal in appearance.

Microscopical Appearances.—Spinal cord

apparently normal, with the exception of slight sclerosis in the columns of Goll in cervical region. Nerve roots normal. In one of sacral nerves before its exit from spinal canal was found a marked increase in the endoneurium, with diminution in the number of the nerve fibres, and an irregularity and indistinctness in these appearances. The right sciatic nerve showed the same changes more marked. In the posterior tibial the process was even more advanced, and in this only an occasional nerve fibre could be detected. Microscopically the gastrocnemius was composed almost entirely of adipose tissue; only here and there atrophied muscle fibres were found. The small nerve trunks in the muscle showed advanced degenerative neuritis, with comparatively little new growth of connective tissue in the nerves.

The president thought that in this case it had been fully demonstrated that the alcohol paralysis was due to a neuritis and not to a myelitis.

Dr. M. A. Starr had seen the specimens, and said there was no question with regard to the existence of neuritis in this case, and the normal condition of the anterior cells of the spinal cord. There was a slight sclerosis in the columns of Goll which he was unable to explain. The same condition had been observed in a case of Hamilton recorded by Granger Stewart. He referred to a well-prepared specimen by Dr. Van Gieson in a case of Dr. Ball's, not yet published; also to the manner of preparing specimens.

Dr. Biggs said that contrary to the ordinary condition found, the process seemed to be more a degeneration of nerve fibre than an interstitial neuritis, especially in the smaller nerves.

Dr. Noyes spoke of the frequent occurrence of amblyopia with alcoholism, and said it was due to a partial neuritis of the optic nerve, referred, as had been shown, to the centre field and not to the field at large. He suggested that in cases like the one reported by Dr. Biggs, the neurologists should make careful examination of the optic nerves. In reply to Dr. Starr, whether scotoma was due as frequently to tobacco as alcohol, he said it might be due to either, but the patients frequently combined the two habits.

The patient said the name alcohol paralysis was rather begging the question. This patient, it seems, had been only a moderate drinker. The same fact had been noticed in other cases.

Abstract of Dr. Stevens's paper on

Irritations arising from the Visual Apparatus considered as Elements in the Genesis of Neurosis.

Two classes of influences were recognized as causes of functional nervous disorders; the remote and the immediate. The remote causes may be sufficient to perpetuate a neurosis when once a nervous irritation has been instituted. While immediate causes rarely induce long continued disorders, a pre-existing influence may serve to continue it indefinitely. It is of little practical importance that some exciting circumstance has given rise to a nervous trouble. The event has passed and cannot be recalled. If there is an underlying cause, it is of much more importance.

Persons in whom underlying causes of neurosis exist are said to possess a neuropathic predisposition, and those subject to it are liable from trifling immediate causes, to suffer from various neuroses. In a considerable proportion of cases the neuropathic tendency is hereditary. But the result is not always manifested in the same form in different generations.

A third class of cases which should be recognized may be designated as *modifying tendencies*, among which may be mentioned vitiated atmosphere, the period of life, and the performance of certain physiological functions.

Often as a result of the predisposing influence, when one form of complaint is supposed to be cured, the subject of it is simply suffering from some other form.

Must the predisposing cause of neurosis be general, pervading the whole organism, or must it of necessity be located in the great nerve centres, or may it be entirely local and outside those great centres? Undoubtedly it may be local, and confined to any portion of the nervous system.

Inasmuch as the tendency is often hereditary, may not the evil consist of some peculiarity of anatomical structure, or of physiological adaptations which are inconsistent with the most regular and easy performance of the function of a part or parts; and may not certain classes of mechanical peculiarities be unusually liable to become factors of physiological disturbance?

If we answer in the affirmative, we assume a hypothesis which must be maintained by long-continued observations conducted in a spirit of judicial independence, and free from the bias which might result from occasional and exceptional experiences. The conclusions announced this evening are based upon observations in more than five

thousand cases in private practice, and of a considerable number in public institutions, all of which have been made with as much precision as the exacting demands of an active professional life would permit. The central truth as arrived at by these observations may be stated as it has already been done in a memoir to the Royal Academy of Medicine of Belgium in 1883, as follows:

Difficulties attending the functions of accommodation and of adjusting the eyes in the act of vision, or irritations arising from the nerves involved in these processes, are among the most prolific sources of nervous disturbances, and more frequently than other conditions constitute a neuropathic tendency.

In the proposition, all causes of nervous irritation are recognized. It is held that the influences indicated are pre-eminent, but not exclusive permanent causes. Let it be remembered that it has been universally conceded that the nature of the neuropathic tendency is unknown. If one pre-eminently important element is demonstrated, it is not to be rejected because it may not include the whole.

The speaker proposed only to illustrate the result of his experience by exhibiting some photographs of cases of notable neuroses which showed very remarkable changes of physiognomy, such as habitually occurred when certain hurtful tensions of the ocular muscles were relieved. If he had designed to present only the most remarkable cases of the class to which these belonged, he would have chosen only a few of these. The design was, however, only to show by these contrasting photographs the very notable improvement which in obstinate and even by ordinary means hopeless cases of the most important neuroses might be expected, from relief from certain hurtful tensions of the eye muscles.

The portraits were in pairs, the first having been taken at the commencement of treatment, the second at a later period, the interval being on an average about one month. The first series represented cases in his private practice; the second series, cases which were under under his care for a short time at the Willard Asylum for the Insane last summer. The first series had been made by various photographers; the second by Dr. P. M. Wise, superintendent of the Willard Asylum. Thirteen pairs of photographs were exhibited, nine of the first and four of the second series. In all these very striking contrasts existed between the first and second portraits.

In No. 1, a weary and listless young girl, a sufferer from headache, and who had never been able to attend school, is seen to be transformed in twelve days to a vivacious and thoroughly awake child. Following relaxation of each of the inner eye muscles, the change in health was marvellous. In No. 2, an epileptic girl, whose vacant gaze and half-open mouth indicated a profound degree of dementia, within a single month put on an appearance of robust health and of lively intelligence. In another case, a boy, choreic from infancy and imbecile, whose constant movements were too rapid even for the modern photographer, showed in the second photograph, from which the distortions of the face and wrinkles in the skin had disappeared, a clever mental state.

The speaker related in brief some of the results of a short season among the most hopeless cases in the Willard Asylum for the Insane. Two of these hopeless cases, who had during the month preceding treatment directed to the eye muscles, been subjected to about one hundred and seventy convulsions, suffered only about forty convulsions in the month succeeding that treatment, notwithstanding the withdrawal of all bromides.

Fifty per cent. of epileptics so treated had remained well for a length of time varying from many years to only a single year, but sufficiently long to indicate that a great change had been wrought. Thirty-two per cent. had received very marked relief, but short of absolute cessation of the complaint. They were all better without drugs than they had formerly been with. In seventeen per cent. no good results had been obtained.

The speaker thought that with a better understanding on his own part of the extremely complicated conditions of the ocular muscles often found in epilepsy, this record could be improved.

The methods of procedure in examining for muscular defects was given. It differed radically from that proposed by Graefe and generally adopted, and from other methods which had been suggested. His method of performing tenotomy was also described.

In conclusion, Dr. Stevens said he thought it was not unreasonable to look for the future advance in medical practice along two great lines: the one related to micro-organisms, the other to irregular phenomena resulting from well-defined causes of irritation, which causes must be sought for principally in the direction of difficulties in the performance of necessary functions. With the removal of such difficulties we might look with confident expectation to the cessation

of the peculiar irregularity which constituted the special form of nervous disease.

Dr. E. C. Seguin said with regard to the ætiology of neuroses and serious mental disorders that he thought we ought to look a great deal deeper than the exciting and superficial causes which occurred in many cases of that kind. In epilepsy and chorea, for instance, he thought we had to look for the efficient cause not in disturbed external apparatus, but to hereditary predispositions and faulty tendencies. That faulty external apparatus would cause more attacks, or possibly aggravate the mental disorder, he thought no one would deny. Consequently, the optic apparatus, the genital apparatus, etc., should be put in perfect order. As to the great improvement after tenotomy in epilepsy, the records of surgery and medicine were filled with cases in which trauma of various kinds had interfered with epileptic manifestations for months, or even years. It seemed to him the report of a case within six months after tenotomy was rather premature. He referred to one of his cases of epilepsy recently submitted to division of the ocular muscles, the bromides at the same time being withdrawn, and three days later she commenced to have from six to twelve convulsions in the twenty-four hours—more than she had ever had before the operation. He had had patients go three years without an epileptic attack, and then have a relapse.

Dr. H. D. Noyes thought the precise ocular conditions in the cases reported should have been recorded; perhaps they were in that part of the paper not read. He had with him exact records of a number of cases of ocular trouble, with the result of treatment. It has not fallen within his experience to meet with the class of cases referred to by Dr. Stevens. He dwelt upon the importance of making a thorough ocular examination, including that of the muscles of the eye, in every case. He had come to realize more and more the importance of insufficiency of the external recti. He had obtained benefit in many cases from prisms. He spoke of the method of examination and of performing tenotomy. The paper deserved the most careful consideration.

Dr. D. B. St. John Roosa said that that part of the paper which especially concerned the ophthalmologist was as old as ophthalmology itself, and it did not call for discussion to-night. The real point in the paper was, he thought, that the correction of errors of refraction, improper relation between the ciliary and internal recti muscles, and other deviations of the ocular muscles, was capable of curing constitutional disease. He took it that epilepsy was a constitutional disease, and not merely a functional disturbance; the same was true of chorea. The question was, did these operations cure epilepsy and chorea? But it had been shown that people with chorea got well without ever having error of refraction corrected. It had also been shown that the vast majority of people who were not myopes were hypermetropics, yet suffered no inconvenience from it. In this, the author's second paper, another step had been taken, namely, that these constitutional diseases—epilepsy and chorea—were due not solely to errors of refraction, but to want of co-ordination between the recti and ciliary muscles. Then the prism test came upon the field, and we had to exercise the ocular muscles with prisms. Then in the order of advance came the doctrines taught in the paper to-night. Granting the claims of the paper, that the patients had for a time after correction of an ocular difficulty been greatly relieved, possibly cured, yet that was a long way from assuming that the ocular disturbance, whatever it was, was the cause of the epilepsy. Many great men having strabismus had not become choreic, epileptic, nor insane.

Dr. A. L. Ranney thought that following the exhibition of the photographs little need be said in confirmation of the views advanced by Dr. Stevens. The photographs were so startling that they would be accepted in any court of justice by an unprejudiced jury as proof that unmistakable benefits had been derived from the treatment. He had personally seen and examined several of the cases, and he considered the published histories as decidedly under-estimated. Dr. Ranney had performed the operation for the relief of ocular insufficiency nearly two hundred times, and had carefully examined the condition of refraction and accommodation, as well as that of the ocular muscles, in several hundred subjects afflicted with various forms of nervous dsiease. He did not pretend to pose as an oculist, but as a neurologist. Originally he was a skeptic, but his skepticism became no longer tenable when he saw a choreic and epileptic imbecile in Dr. Stevens's office who was perfectly restored in a short time to health and mental sanity by the method he had described. He thought the paper would tend to establish a new era in neurology. Regarding the operation, in no case had he had bad effects from it, but the treatment required careful regard to detail.

Respecting the view that the eye is an im-

portant factor in creating and prolonging the so-called "neuropathic predisposition," the following facts were pertinent:

1. No one has yet shown in what this predisposition lies, hence if Dr. Stevens has shown that eye-defect is an important element in these conditions, a great advance has been made.

2. There is no recognized pathology in functional nervous diseases.

3. Heredity is very common in these affections.

4. My records, in common with those of Dr. Stevens, go to show that eye-defect is found in a very large proportion of such subjects.

5. Many of the eye-defects found can be shown to be congenital—being inherited like feature.

6. The manifestations of the neuropathic predisposition vary with each case, and are called forth often by trivial circumstances which are too frequently regarded as of great clinical interest.

In the treatment of the severer forms of functional nervous disease—for example, in chronic epilepsy—one radical cure without the aid of drugs offsets a thousand failures as a proof of the scientific value of a discovery. Dr. Stevens had seven cases free from epileptic seizures for more than five years after tenotomy of the eye-muscles, and without the aid of drugs. This could not be explained by chance. Then the records of the Willard Asylum were hard to contradict.

During the past year and a half he had seen sixteen epileptics in private practice; in only one was no defect in the eye-muscles found. He had an opportunity to operate on the eyes in eight of the cases. Three of these were cured; two had had no fits for over one year. In the five cases still under observation the attacks had been lessened in all, drugs having been withdrawn. One had been reported by Dr. Stevens. In headache and neuralgia he had had some very remarkable results from tenotomy of the eye-muscles; also satisfactory results in hysteria and hystero-eyilepsy.

Dr. Herman Knapp said his practice had not brought him much in contact with people who had neurotic conditions, and most of those whom he had seen had passed into other hands. He was very much surprised to learn that there was so high a percentage of ocular difficulties in the patients Dr. Stevens examined in the asylum. He thought nervous people generally showed not only one complaint. Many people, especially young ladies, who suffer from headache, etc., cease to complain after correction of a deviation of the eye-muscles, etc. He had listened with the greatest attention to Dr. Stevens, and he felt quite sure that his work was not only legitimate, but that it was highly promising. He was only afraid he would not be spared disappointments in that line of treatment.

Dr. Gruening said his experience had been very much like that of Dr. Knapp. He always examined for muscular defect, and said that when one placed a prism before the eye it disturbed binocular vision. For the correction of this apparent muscular defect an operation was performed, but the muscle was sewed to its original place, or the lateral attachment was not divided; and this was only the simulation of an operation. He hnd benefited many patients by cylinders.

Dr. Stevens, in closing the discussion, said there was no suggestion in the paper regarding cures. He did not believe in cures. Take away the cause of the trouble, and they get well. If the patients could not be said to be cured, it was still a very fortunate thing that they had got rid of their chorea, epilepsy, etc.

CHICAGO MEDICAL SOCIETY.

At the March meeting of this society several papers of general interest were presented. Of these the most noticeable was by Dr. A. E. Hoadley on

Deep Tubing of the Larynx as a Substitute for Intubation, with a Report of Nine Cases.

In these cases a tube was introduced so that the head of the tube rested within the larynx. Eight of the cases were able to drink consecutive swallows immediately after the operation. While all the cases were fatal, the deep intubation gave the greatest relief. Dr. Hoadley believed the most objectionable feature in the O'Dwyer method is the projection of the head of the tube over the top of the larynx, interfering with deglutition and exciting cough. This he proposes to obviate by "deep tubing," which he accomplishes by modifying the tube as follows: shortening the tube to nearly the length of the larynx, making the head of the tube conform more nearly to the interior of the upper part of the larynx, making the upper surface of the head of the tube cup-shaped to facilitate the introduction of the extractor, having that portion of the posterior border of the tube corresponding to the arytenoid cartilages stand on

a plane anterior to that of the rest of the tube, so that pressure at this point will be slight, making the obturator three-eighths of an inch longer than the tube to facilitate the deep introduction of the tube. The long tubes, owing to the mobility of their lower ends, produce irritation in the trachea, exciting cough and pain.

EDITORIAL DEPARTMENT.

PERISCOPE.

A New Treatment of Gonorrhœa Chronica by Means of Grooved Bougies.

Dr. Leopold Casper thus writes in the *Lancet:*

The extraordinary difficulty of healing some cases of chronic gonorrhœa is well known. There are men who have every morning an exudation, although they have tried every possible remedy against the evil. Frequently, especially after coitus, the chronic disease becomes acute, which often, more particularly in young married men, leads to disagreeable results. The difficulty of healing chronic gonorrhœa is to be sought less in the means used than in the way in which they are used. This will appear when we more closely consider the anatomy of the urethra and chronic gonorrhœa.

The male urethra is a tube from fifteen to eighteen centimetres long, which in its separate parts is constructed so differently that it appears unjust *a priori* to place a disease of one of these parts under the class named "gonorrhœa chronica." For the same reason that the cervix uteri is to be separated from the uterus, the pars spongiosa must be separated from the partes membranacea and prostatica. An inflammation of the pars spongiosa does not necessarily imply that the pars membranacea is also inflamed, or, *vice versa*, that an inflammation has its seat in the membranous portion while the spongious part is normal. In fact, most cases of chronic gonorrhœa are located at the end of the bulbus, or at the juncture of the end of the bulbus to the pars membranacea. They begin as acute inflammation in the fossa navicularis and slowly extend to the bulbus. This will be clearly seen by the following: Of 100 cases of callous stricture, about seventy occur in the bulbus, or at the place where the bulbus becomes the pars membranacea, twenty in the fossa navicularis, and ten in other parts of the pars spongiosa. Never does a callous stricture appear in the pars prostatica. The callous stricture being the result of gonorrhœa, the favorite seat of this disease will of course be the above-mentioned places, where strictures mostly occur. Although, as regards the pars cavernosa, the abundance of cavernous tissue will favor hypertrophy of the stricture-producing tissue in a higher degree than in the partes membranacea and prostatica, still there would be more strictures in the posterior half of the pars membranacea and in the prostatic part, if all chronic gonorrhœa were to extend to the bladder. Of course the inflammation sometimes extends to the posterior part of the urethra, but this is not a rule. In this respect the acute and chronic gonorrhœa resemble each other. Rarely does the inflammation extend to the bladder in acute cases, whereas this frequently happens in chronic cases. Thus we speak of a "gonarrhœa anterior" when the inflammation does not pass the bulbus; if it extends further we call it "gonorrhœa anterior et posterior;" if the disease disappears before the bulbus and remains located in the posterior part of the urethra, we call it "gonorrhœa posterior." The bulbus is therefore a boundary in respect to the pathology of gonorrhœa. This will appear more comprehensible when we consider that the bulbus is also a boundary in an anatomical respect. The lamina media fasciæ perinei (Dittel), or the fascia perinei propria (Hyrtl), the important boundary between those organs which lie within the pelvis and those which lie outside of it, is closely connected with the bulbus. In front of this membrane is the pars cavernosa of the urethra, with the musculus transversus perinei superficialis and the musculi bulbo-ischio-cavernosi; behind it is the membranous and the prostatic portion, with the glandes Cowperi, the prostata, and the important musculus constrictor urethræ, also called "compressor partis membranaceæ urethræ." This muscle is composed of two bundles, of which the upper lies above and the lower under the pars membranacea; both join at the median line, together with the same muscles coming from the opposite side, so as to form a broad muscular ring to compress the urethra.

The importance of the bulbus as a bound-

ary of the anterior and posterior urethra is apparent when we consider the treatment of gonorrhœa as hitherto practiced—viz., injections by means of syringes. This method is suitable for most cases, but not for all; for the fluid injected into the urethra does not pass the bulbus without the use of force, which no one would care to employ. If an injection is made slowly, and with moderate pressure, the fluid extends to the front part of the urethra, and passes to the musculus compressor, but not beyond it; for, were this the case, the fluid would run through the posterior urethra into the bladder, and remain there, whereas it is known that after a common injection the fluid comes back on removing the finger from the meatus. The in-going solution causes a reflex action of the musculus compressor, which results in a spasmodic closing of the urethra. The inefficiency of the usual syringes for treating gonorrhœa chronica posterior is therefore clear. At the same time we must remember that, if we wish to irrigate the posterior portion of the urethra, we must not push the catheter so far that its point touches the bladder; for in this case the catheter fills the urethra, and the injected fluid flows out again through the eye of the catheter, without having touched the walls of the urethra.

Concluding from the foregoing that (1) all that which gathers before the musculus compressor in the urethra flows towards the orificum cutaneum, and that (2) a fluid gathered in the posterior part of the urethra runs into the bladder because of the inferiority of the musculus sphincter vesicæ internus as against the musculus compressor, we receive a hint as to the diagnosis between gonorrhœa anterior et posterior. If we see a drop on the orificum cutaneum, or that the lips stick together, or we find yellow spots in the washing, the gonorrhœa is surely seated at the bulbus, as all that which accumulates in front of the bulb flows toward the meatus. If these signs are absent, the diagnosis is more difficult. The passing of a button-ended bougie causes in most cases only a slight burning and discomfort to the sound portions of the urethra, but when we touch a sore part the patient feels severe pain. If there is tenesmus, we have surely to deal with a gonorrhœa posterior; if tenesmus is present, if a drop appears on the orificum cutaneum, if the lips are glued together, or there is a spot in the washing, a gonorrhœa anterior et posterior is proved. On the other hand, if there is no tenesmus, we are not justified in the conclusion that there is no gonorrhœa chronica posterior. In acute gonorrhœa posterior tenesmus always appears; in chronic we often miss it.

The examination by means of the endoscope is always decisive, but the irritation which even the most careful introduction of this instrument will cause renders its application undesirable. Less painful and much more simple is the following proceeding. Tell the patient to hold his urine for five or six hours, and then to pass it into two glasses.

If the first glass contains flakes or films, while the second glass remains clear, a gonorrhœa anterior may be diagnosed; should both glasses appear turbid, then a gonorrhœa posterior is present. To distinguish between gonorrhœa posterior and cystitis, which is likewise accompanied by turbid urine, is exceedingly easy; for, whereas in chronic posterior gonorrhœa the first portion of the urine passed is more turbid and contains more films than the second, in cystitis the reverse is the case. The reason of this is, that the pus formed in the bladder will, according to the law of gravitation, sink to the fundus vesicæ, and will therefore only appear in the urine expelled last.

Considering now the pathology of gonorrhœa, it is known that the inflammation, as differing from urethritis, does not remain in the mucous membrane. Beginning in the mucous membrane, it continues into the submucous tissue, in the corpora cavernosa, and in the muscles. The product of the inflammation is an infiltration of the cells of the diseased parts. This infiltration gradually becomes fibrous tissue (Bindegewebe), which in its turn produces the cicatrization called "stricture." At the same time epithelial cells are formed, reaching to the surface of the mucous membrane and forming a thick epithelial stratum. The upper cells of this stratum, constantly sloughing, exfoliating, and mingling with the mucous secretion of the glands, constitute the exudation which characterizes chronic gonorrhœa. The glands and lacunæ of the urethra are also affected. From the fossa navicularis to the bulbus there are many lucunæ Morgagni, from eight to twelve millimetres long and half a millimetre wide, and several Littré's glands. The catarrh extends to both glands, and Dittel considers the well-known flakes or films and the goutte militaire as a product of the catarrh of Littré's glands and of the sinus of Morgagni.

From this short review, it is clear that many chronic gonorrhœæ already represent the first stages of strictures, or, as Otis calls them, "large-sized strictures," which natur-

ally cannot be cured by astringent solutions, or even such as are fatal to gonococci. If they are to be cured, local pressure must be used to remove the cell infiltration, while medical treatment is adopted to affect the catarrh. For these reasons treatment with bougies against chronic gonorrhœa has been mostly practiced. Some went a step further and used bougies covered with simple salves; others, as Unna, employed bougies with a paste composed of butyrum cacao and different medicaments, which dissolve at body temperature. Similar considerations influenced me in the treatment of gonorrhœa chronica. But the usual bougies and the bougies covered with salves and paste not being successful in obstinate cases, I tried a modification. I was convinced that the paste bougies did not sufficiently fulfil their purpose, for very often the bougie does not reach the bladder, because the narrow walls of the urethra will not permit it to pass with the hardened paste; consequently one would have to wait, as Unna says, until the paste was dissolved, and then melted salves would not reach the places behind the stricture, where the catarrh is very often located, and for which they are intended. Further, cacao butter should not be allowed to enter the bladder if it can possibly be avoided, for after such treatment I have seen a simple gonorrhœa anterior become a gonorrhœa posterior and a cystitis colli with severe tenesmus; twice I have observed epididymitis after it, but I cannot decide whether *post hoc* or *propter hoc*.

These considerations caused me to devise a method which would have the advantages of the combined mechanical and chemical treatment, and at the same time avoid the evils I have mentioned. For this purpose I avoided nickel-plated bougies with grooves. These bougies are slightly conical and twenty-five centimetres in length. They have six grooves, which are about a millimetre and a half deep, and become shallower towards the point, stopping entirely at about five centimetres from the point, so that the front part of the bougie is entirely smooth.* Into the grooves of these bougies I pour a paste, which hardens at the ordinary air temperature. With respect to the composition of the paste, I recommend the following: Cacao butter, 100 parts; nitrate of silver, 1 to 1·5 part;† balsam of copaiba, 2 parts. I tried, also, other preparations, such as resorcin, iodoform, zinc, and iodnatrium, but found them all inferior to the nitrate of silver. With regard to the preparation of the bougies, I must lay stress on the fact that the salve must not be heated too much, for in that case the nitrate of silver would be reduced to silver and would be inefficient; therefore, put about two teaspoonfuls of the paste into a small vessel and heat it slowly and carefully. The vessel must not become so warm that it cannot be touched with the bare hand. Such a degree of heat is not necessary to dissolve the paste, and, as I have shown, is injurious. Neither is it necessary to wait until the entire contents of the vessel are melted, for if so the already dissolved salve becomes too hot and reduced. After dissolving, the salve is poured over the bougie, which is horizontally laid over a vessel to catch the drippings. After the salve has become hardened the bougie is smoothed with any sharp-edged tool. Care must be taken that the smooth front part of the bougie is left uncovered by the salve. Before using, draw the bougie several times through the hand, the warmth of which will cause sufficient of the salve to melt to lubricate the metallic surface of the bougie. The smooth front part of the bougie is rubbed with glycerine so that the instrument, if the size corresponds to the diameter of the urethra, will easily pass. The grooved bougie leads the salve beyond the narrowed places. At the temperature of the body the salve melts in one minute.

The greater efficiency of medicaments in this form over injections is clear, as the oily cacao butter will keep the ingredients in closer and longer contact than water. As to the glands and laminæ of the urethra, it is probable that the thick fluid matter enters them more easily after they have been dilated by the bougie. Of the bougies described, I use Nos. 18 to 23, French (Charrière). I never use smaller than No. 18, but prepare the urethra with small bougies until this size will pass. As soon as this is accomplished, I begin the cure with my grooved bougies, which I pass daily. If there is difficulty in passing No. 18, I employ the same sized bougie the next day, and then pass on to No. 19, etc.

After using these bougies. I have never witnessed a case of chill or fever, but I will not say that this could not occur just as after passing ordinary bougies. The pain or disagreeable feeling is not greater than that caused by the introduction of any other instrument into the urethra. Nay, the well-known burning in the urethra frequently

* Weiss & Son, of 287 Oxford street, London, manufacture these bougies, for which an English patent has been applied for.

† Old-standing cases require more than one part of nitrate of silver, but I should not recommend more than 1·5.

experienced by patients in passing urine after the first application of the bougie will often be entirely absent. The longer the bougie is left in, the more favorable is the effect on the infiltration. Some patients feel burning and tenesmus after a few minutes, others after half an hour, and others still later. The time during which the bougie may remain in is dependent on these circumstances. Although the salve is so prepared that it cannot injure the normal parts, I avoid introducing it unnecessarily into the posterior portion of the urethra, whence it would flow into the bladder. I effect this by passing the bougie, in a case of gonorrhœa anterior, only so far that its point just touches the musculus sphincter vesicæ internus. As the grooves with the salve begin at a distance of five centimetres from the point, none or very little salve will flow into the posterior urethra. In a case of gonorrhœa posterior I push the bougie further, so that its grooved part lies in the partes membranacea and prostatica. Here we cannot avoid a little of the salve flowing into the bladder. The results I have obtained with this treatment are satisfactory. On an average, I succeeded by ten applications to effect a cure of cases of chronic gonorrhœa which had before proved very obstinate. In a few cases twenty and more applications were necessary Frequently after using a very small number of bougies a striking improvement was visible.

Whether a chronic gonorrhœa which no longer shows a secretion at the meatus will improve can be decided by simply examining the urine with the naked eye. The quantity of gonorrhœal flakes, their size and length, will diminish with the gradual process of cure. The microscope teaches us at the beginning the thick flakes are almost entirely composed of pus-corpuscles, while epithelial cells are but few. With the improvement of the chronic gonorrhœa the quantity of pus-corpuscles diminishes, and that of epithelial cells increases, till at last but few pus-corpuscles are to be found here and there embedded in the epithelial cells. Thus we are enabled exactly to observe the different stages of chronic gonorrhœa. More than once I could readily, after two applications, perceive a difference in the composition of the flakes in so far as the proportion of epithelial cells to pus-corpuscles had changed in favor of the former. Altogether by this procedure I have cured about fifty obstinate cases of chronic gonorrhœa, which had resisted all other methods; twenty-seven of these had been cases of a year and a half's standing, twelve of more than a year's standing, and others less.

On the Treatment of Sneezing, Hay-Fever, Asthma, etc., by the Galvano-Cautery.

Dr. F. De Havilland Hall thus writes in the *Lancet*, November 13:

All introducers of novel medical or surgical procedures are apt to run to extreme lengths, and to arrogate to the plans they have brought forward claims to which they can have no pretension; hence the caution with which the statements of innovators must be received. It would be a great pity, however, if these extravagant assertions should prevent attention being paid to the kernel of truth contained in the husk of excessive laudation; and this seems especially needful in regard to the views propounded by Hack, of Freiburg, who undertook to cure a large number of neurotic affections by the free use of the galvano-cautery to the mucous membrane covering the inferior turbinated bone; later on, he certainly modified his opinion somewhat, but he still claims too large a field for this plan of treatment. That there are certain neurotic affections the starting-point of which is the nasal mucous membrane cannot, I think, be denied, and in these cases cure can be most readily effected by treatment directed to the part primarily affected. Hack, by pointing out that the most ready method of influencing the nutrition of the mucous membrane of the nose is by the employment of the galvano-cautery, has enabled us to treat successfully and promptly many cases formerly very difficult to manage. As a type of the kind of case in which I would use the galvano-cautery to the nose, the following may be taken as a good example.

Mrs. C., aged twenty-seven, was sent to me last May by my friend Dr. Penny, and she gave the following account of herself. She said that she had been married eighteen months. In June, 1885, while pregnant, she commenced to suffer from violent fits of sneezing; these continued to occur very frequently until October 25, when she was delivered of a still-born child, the limbs of which were said to be much contorted. On inquiry I found that for the last three or four years she had suffered from hay fever, usually lasting about a month. When she applied to me in May, she stated that she was again pregnant, being rather more than three months advanced; that the fits of sneezing had recurred as severely as last year, and that her doctor had advised her that it was of the utmost importance, in

view of what had occurred in her former pregnancy, that she should seek relief from her distressing ailment. Apart from the sneezing, her general health was good in every respect. I found the mucous membrane covering the inferior turbinated bone on the right side greatly hypertrophied; the same condition, though somewhat less marked, existed on the left side. After applying a solution of cocaine, I used the galvano cautery (as described later on) to both nostrils. The patient did not complain of any pain from the procedure. She was directed to come again in a fortnight. As I was unfortunately prevented by illness from seeing her, Dr. Butlin kindly made the second application of the galvano-cautery. I next saw her on July 3. She informed me that the sneezing was not so bad as formerly; it was less frequent at night, and there were only about four attacks daily. On examining the nose, the mucous membrane was found to have contracted to such an extent that I did not think it necessary to make another application of the galvano-cautery. I recommended her to use a 2 per cent. solution of cocaine in the form of spray night and morning, and to have a bottle of carbolized smelling-salts to inhale whenever an attack of sneezing seemed imminent. The further history of the patient is best told in an extract from a letter I received from her husband on August 17: "I am very pleased to be able to report *very great* improvement; I cannot say that it has quite left her, but it is only very occasional now, and nothing like it used to be. The carbolized salts prevented many an attack of sneezing, and she is able to do without the spray, and I think it may now be said that she is cured of a most inconvenient and, in her case, dangerous complaint."

When I undertook the treatment of this case I was not very sanguine as to success. In the first place, I do not think that the condition of the nervous and vascular system which obtains in pregnancy is likely to influence favorably a procedure, the object of which is to remove the tendency towards certain reflex actions by diminishing or annihilating the irritability of the locality upon which the train of symptoms depends. Secondly, it was to my mind very uncertain to what extent the fœtus in utero was itself the predisposing cause of the attacks. In favor of this view was the fact that after delivery the attacks ceased, only to recommence when she became pregnant. Lastly, there was the history of several attacks of hay fever, and I was afraid that though she might get temporary relief, nevertheless during the summer months she would probably have a return of the complaint. The result, however, was better than I expected.

The introduction of cocaine has inaugurated a new era in the treatment of nasal diseases and of the various reflex symptoms dependent thereon. This has been brought about in two ways: first, and most important, the local anæsthetic effect of cocaine enables one to perform most operations within the nose without causing the patient pain worth speaking of, and without having recourse to general anæsthesia; and, secondly, by the power it has of causing contraction of the nasal mucous membrane, a much better view can be obtained of the posterior nares. The method of treatment I employ is the following: In the first place, it is necessary to make an examination of the nasal mucous membrane without the use of cocaine; otherwise, owing to the action of the drug to which I have just alluded, the hypertrophied parts might be overlooked. Having settled which areas are to be attacked, I spray out the nostril with a 10 per cent. solution of cocaine. Then I wait five minutes, and apply, by means of the brush, a 20 per cent. solution of the same drug to the part of the mucous membrane which is to be cauterized. Again waiting five minutes, I try if the sensibility of the mucous membrane is annihilated; if not, I wait a little longer, or, if necessary, make a second application with the brush. As soon as I have satisfied myself that the mucous membrane is insensible to pain, I make two or three deep furrows parallel to one another in the mucous membrane by means of one of Schech's delicate platinum-headed galvano-cautery instruments heated to a red heat by a galvanic battery. All that the patient will have to do after the operation is to pass a little cold cream or zinc ointment up the nose, which will relieve the smarting caused by the burning. In about a week or ten days, according to the depth of the furrows and the idiosyncrasy of the patient, the burns will have healed, and, if necessary, a further application may be made, though I prefer to wait two or three weeks to see how much contraction has taken place before repeating the process. If the cocaine has been properly applied, there is little or no pain at the time of the operation, and though occasionally the patients complain of the smarting which comes on the next day, some cooling application generally suffices to relieve this.

Notwithstanding that I have a firm belief in the efficacy of this operation—if so sim-

ple a procedure may be dignified by the name—I do not usually employ it till I have tried other measures and failed. I remember one case in particular which I saw three years ago. In this patient there was hypertrophy of the mucous membrane of the nose, with the history of violent attacks of sneezing and running from the nose; after a time the sneezing ceased, and was replaced by attacks of asthma, coming on about 1 a. m. and lasting till 4. I had quite made up my mind to operate, but, as the patient was pregnant, I thought it advisable to wait until after her confinement, so I ordered her a mixture containing three grains of citrate of caffeine and ten grains of bromide of potassium. I did not see the patient again for some months, but on her next visit she told me that she had experienced great relief from the mixture, and that she had not had a bad attack of asthma since her last visit. I have seen her again within the last few months, but, as her condition has much improved, I do not think it will be necessary to have recourse to the galvano-cautery. In Vol. I. of the Westminster Hospital Reports, I have recorded a case of excessive sneezing which had lasted for eleven months; in this patient, syringing out the nostrils with a luke-warm solution containing the glycerine of carbolic acid, borax, and the bicarbonate of soda, sufficed to effect a speedy cure. I have mentioned these two cases to show that it is not necessary in all attacks of violent and protracted sneezing, hay fever, asthma, etc., to employ the galvano-cautery, though in some cases the cautery is the most speedy and certain method of treatment.

Before ending this short account, I would wish to direct attention to the carbolized smelling-salts, from which the patient on whose case this communication is based derived much benefit. I have ordered the salts very frequently, and they almost invariably give relief; and to persons prone to coryza I would strongly recommend them. Directly the usual indications of a cold in the head are experienced, the salts should be inhaled, and recourse had to them every ten or fifteen minutes while the irritation about the nose lasts. In my own case I have aborted many a threatened attack of coryza by this means. As regards the use of cocaine spray for the relief of hay asthma, I do not think much good is to be expected from this drug; the constringing action which at first results from its use is followed by a dilatation of the vessels, and the fluxion which accompanies this sometimes sets free the reflex, which results in an attack of sneezing or asthma.

The Dietetics of Pulmonary Phthisis.

Dr. A. L. Loomis formulates the following rules to govern the dietetics of phthisical subjects (*Journal of Reconstructives*, October, 1886):

1. Every phthisical patient should take food not less than six times in the twenty-four hours. The three full meals may be at intervals of six hours, with light lunches between.

2. No more food should be taken at any one time than can be digested easily and fully in the time allowed.

3. Food should never be taken when the patient is suffering from bodily fatigue, mental worry, or nervous excitement. For this reason, mid-day naps should be taken before, not after, eating. Twenty to thirty minutes' rest in the recumbent posture, even if sleep is not obtained, will often prove of more value as an adjuvant to digestion than pharmaceutical preparations.

4. So far as possible, each meal should consist of such articles as require about the same time for digestion, or, better still, of a single article.

5. Within reasonable limits the articles of any one meal should be such as are digested in either the stomach or intestine alone, *i. e.*, the fats, starches, and sugars should not be mixed with the albuminoids, and the meals should alternate in this respect.

6. In the earlier stages the amount of fluid taken with the meals should be small, and later, the use of some solid food is to be continued as long as possible.

7. When the pressure of food in the stomach excites cough, or when paroxysms of coughing have induced vomiting, and the ingestion of food must be delayed until the cough ceases, or an appropriate sedative may be employed. In those extreme cases where every attempt at eating excites nausea, vomiting, and spasmodic cough, excellent results are attained by artifical feeding through the soft-rubber stomach-tube.

8. So long as the strength will permit assimilation and excretion must be stimulated by systematic exercise, and when this is no longer possible, the nutritive processes may be materially assisted by passive exercise at regular intervals.

The following may serve as a sample menu for a day in the earlier stage. The meat soup is made by digesting finely chopped beef (1 lb.) in water (Oj.) and hydrochloric acid (m. 5) and straining through cheese-cloth. Menu:

On waking, one-half pint equal parts hot

milk and Vichy, taken at intervals through half an hour.

8 a. m. Oatmeal with abundance of cream, little sugar; rare steak or loin chops with fat, cream potatoes; soft-boiled eggs, cream toast; small cup of coffee, two glasses of milk.

9 a. m. Half ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk.

10 a. m. Half pint raw meat soup; thin slice stale bread.

11–12. Sleep.

12:30 p. m. Some white fish; very little rice; broiled or stewed chicken; cauliflower; stale bread and plenty of butter; baked apples and cream; milk, kumyss, or Matzoon, two glasses.

2 p. m. Half ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk.

4 p. m. Bottle kumyss or Matzoon; raw scraped beef-sandwich.

5:30–6 p. m. Rest or sleep.

6 p. m. Some thick meat or fish soup; rare roast beef or mutton; spinach; slice stale bread; custard pudding; ice cream.

8 p. m. Half ounce cod-liver oil, or one ounce peptonized cod-liver oil and and milk.

9–10 p. m. Pint iced milk; cup meat soup.

1–2 a. m. Glass milk, if awake.

An Experimental Research upon Rabies.

Dr. Harold C. Ernst, having received two rabbits which had been inoculated in Pasteur's laboratory, undertook to prove experimentally the following propositions:

1. Is there a specific virus in the brains and cords of rabbits inoculated with Pasteur's material and after his methods?

2. Does the treatment by drying, proposed by him, modify the strength of this virus? And, finally,

3. Does injection with such "modified virus" produced an immunity against an inoculation (or bite) with virus of full strength?

His results with the experiments in detail appear in the April number of *The American Journal of the Medical Sciences*. Dr. Ernst began the investigation as a skeptic, but his experiments seem to justify a change from skepticism to a belief in, at least, a portion of Pasteur's assertions.

The conclusions which Ernst draws from his experimental work he summarizes as follows:

1. There exists in the cords and brains of animals inoculated in Pasteur's laboratory *a specific virus*, capable of the production of similar symptoms through a long series of animals.

2. That these symptoms are produced with absolute certainty when the method of inoculation is by trephining the skull, and injection under the dura mater, with less certainty when the inoculation is by subcutaneous injection.

3. That the strength of this virus is lessened when the cords containing it are removed from the animals and placed in a dry atmosphere at an even temperature.

4. That the symptoms produced by the inoculation of this virus only appear after a certain period of incubation, distinctly shorter when the inoculation has been done by trephining, than when done by subcutaneous injection.

5. That injections of the virus, modified in strength by drying, and in the manner prescribed by Pasteur, exert a very marked protective influence against an inoculation with virus of full strength.

6. That a very moderate degree of heat destroys the power of the virus entirely, whilst prolonged freezing does not injure it.

As will be seen, all of these conclusions are in complete accord with the declarations of Pasteur; their importance lies in the fact that they were reached at a distance from him, and by work entirely separated from any personal influence or bias.

The Means of Topographical Diagnosis of Focal Disease Affecting the So-called Motor Region of the Cerebral Cortex.

The necessity for exact knowledge of the relations between the external surface of the head and the various encephalic regions has arisen so rapidly within the last few years as to force each practical surgeon to work out the required facts for himself with the aid of the few papers that have appeared on the subject. Owing to the absence of any comprehensive monograph giving a complete directory, as it were, of those parts of the brain whose function is so far understood as to admit of the localization of lesions within their boundaries, Mr. Victor Horsley has presented in the April number of *The American Journal of the Medical Sciences*, for the use of those who may be called upon to explore the cranial cavity, a summary of the means adopted by himself as topographical guides to definite portions of the brain, which have so far, in his experience, fortunately been equal to the exigencies of ten cases submitted to operation.

The localization of disease of the encepha-

lon is obviously a two-sided process. First, the diagnosis of the seat of the disease in the nerve tissue, by observation of the symptomatic perversion of function; and, secondly, the determination of the particular part of the skull and soft parts covering the focus of disease. The second part of the process has usually been separated from the first, and considered by itself, under the title of cerebral topography, and may, doubtless, with advantage be thus studied as a distinct subject; but it really is in closer connection with the other division, namely, cerebral localization, than may appear at first sight to the anatomist.

Mr. Horsley points out that the localities in which different functions are represented are not separated by hard outlines (and this belief is also borne out by experiment), but that they occupy absolutely constant focal positions, and in this way will in the immediate future be very accurately mapped out.

The topographical relations of the so-called motor region to the exterior of the skull are lucidly explained, and then he presents an enumeration and limitation of the areas of representation of the different parts of the body in the gyri thus topographically determined. The text is fully elucidated by numerous diagrams.

Pilocarpine in Rheumatismal Tetanus.

The *Pester Med. Chir. Presse*, No. 11, publishes notes of a case of rheumatismal tetanus cured by pilocarpine. A peasant woman, 40 years of age, complained of difficulty in swallowing, which had troubled her for several days. She was unable to open her jaws more than 4 millimetres wide. Dr. Brunäuer (of Eslau) remarked that the muscles of the jaws, of the thorax, and of the abdomen were painfully contracted; the teeth were pressed together so tightly that the patient could not put out her tongue. During the night the attacks were not so frequent (from six to eight); there was a slight relaxation of the masticatory muscles, but the jaws could not be opened more than 2 or 3 millimetres wide; the contractions of the thorax and of the abdomen were clonic, and only became tetanic accidentally; the patient complained of suffocation. T. M., 38; T. V. 38.5; P. 110. The patient could not account for her disorder. The smallest excitement, a draught, a sudden exclamation, etc., caused the contractions. Subcutaneous injections of morphine were practiced during five days. Bromated and iodated preparations, preparations of zinc, salicylic acid, quinine administered internally and in injections, gave no relief. Dr. Brunäuer practiced injections of pilocarpine in doses of 2 centigrammes a day; violent perspiration was induced and prolonged for six or eight days. During the night hydrate of chloral was administered. At the end of nine days' treatment, the patient took 18 centigrammes of pilocarpine; the convulsions completely disappeared, and the patient was able to open her mouth.

Cataract Induced by the Vibrations of Tuning-forks.

Dr. S. Th. Stein, in order to examine the functions of the cochlea, acted on the eyes of very young porpoises, both in the unmutilated state and after the ears had been destroyed, by means of the vibrations of tuning-forks of different pitches. Cataract was produced in both classes of experiments. In the entire animals continuous subjection to the action of a high-pitched tuning-fork induced cataract in from eighteen to twenty-four hours, while a tuning-fork vibrating 100 to the minute produced the same effect in twelve hours. In animals whose ears were destroyed the cataract was much more quickly induced by the tuning-fork, some two or three hours being then sufficient. Dr. Stein's theory is that the condition of the lens is affected by the giving off of heat from the body, and that this is altered by the vibrations, the perception of sound again tending to retard the development of cataract. The members of the Moscow Medical Congress, before whom Dr. Stein related his experiments, did not appear inclined to accept his theories; and Professor Khodin remarked that it was not an uncommon thing for young porpoises to be born with cataract. To this, however, Dr. Stein replied that the cataract produced by his tuning-forks passed off after a time, and could then be re-induced by the same method.

Midwives in Finland.

The obligatory course of studies for midwives in Finland is of one year's duration. There is a supplementary course of two weeks, for those who have shown unusual aptitude, in obstetrical operations, such as embryotomy, the use of the forceps, etc. The students are almost all women of the lower classes, and the only requirements are that they shall be able to read and write. They are allowed to perform operations only when it is impossible to procure the services of a physician.

THE

Medical and Surgical Reporter.

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HOW CAN THE PRESENCE OF SINGLE TUBERCLE-BACILLI BE DEMONSTRATED?

Though there still may be some authors denying the pathogenic character of microorganisms, all agree that the presence of the so-called tubercle-bacilli in the sputa of persons suffering from cough and expectoration, proves beyond the shadow of a doubt, the existence of a tubercular diathesis, while on the other hand the absence of these microbes is by no means a sure indication of the non-tubercular character of the lung disease, as in certain stages of the tubercular malady and under certain conditions these bacteria do not appear in the sputa. It surely is of grave importance as regards regards diagnosis and treatment, as well as regards prognosis, to be able to decide early in such a complaint the tubercular or non-tubercular nature of the ailment. Physical exploration in the earliest stages often leaves us in the dark, and the demonstration of the presence of tubercle-bacilli in the sputum, if possible, is therefore of great importance. There is ne longer any difficulty in discovering large quantities of these microbes, and the MED. AND SURG. REPORTER has at various times informed its readers of the best methods to be pursued in these investigations. The difficulty heretofore existing when the presence of but a few of these bacteria had to be discovered, has now happily been removed, thanks to the exertions of Dr. Biedert, who, in the *Berl. Klin. Woch.*, 12–13, 1887, de-describes a procedure calculated to prove the presence of single tubercle-bacilli in the sputa.

B. conceived the first idea of his procedure from the fact that in tuberculous pus the bacilli collect at the bottom as time wears on. Though they are first intimately mixed with the sputum, slowly but surely they sink to the bottom. His method is as follows:

A tablespoonful of the expectorated matter is boiled with two tablespoonsful of water and fifteen drops of liquor sod. caust. until the whole has become a uniform fluid with no viscidity whatever remaining; then four tablespoonfuls of water more are added, and the boiling is continued until a uniform fluid is obtained, in which only here and there some minute particles swim. Then the mass is allowed to cool, and should then the whole not remain a thin uniform fluid, not coagulating, and with no viscid character, from three to six more tablespoonsful of water may be added to it. The mass resulting is preserved in a glass wider at the top than at the bottom, but after 48 hours the fluid on top is poured off until there re-

mains a layer from five to eight mm. high. From this a few drops are removed by the aid of the (first brought to a white heat) platina-spoon, care being taken to bring with them some of the minute particles swimming in the fluid, and the whole is transferred to the slide, dried, and colored.

In this manner, even should in the original sputum but a few bacilli have been present, one will find in the new preparation a great many of them; but to clearly demonstrate their presence it is necessary, on account of the addition of the caustic soda, to employ the Neelsen-Johnes method for the purpose of coloring. The latter consists in leaving the suspected sputum for one hour in a 5 per cent. solution of carbolfuchins, then the color is removed with 25 per cent. sulphuric acid and the recoloring done with malachite green.

B.'s method saves the trouble with numerous slides, and enables us to demonstrate the presence of tubercle-bacilli in the sputum, even when only one or two bacteria are contained in the latter. In conclusion, B. quotes two cases, where after a chronic consolidation of a portion of the lung had been in existence for some time, a tubercular deposit occurred later and led to tubercular phthisis, the examination of the sputa alone having indicated the grave change.

DR. SQUIBB ON MEDICAL ADVERTISING.

Dr. E. R. Squibb, of Brooklyn, N. Y., is a manufacturer of medical supplies, and publishes a small periodical called *The Ephemeris*, for the purpose of discussing and advertising them. He does not advertise himself in other medical journals, having one of his own; and this manner of doing business no doubt pays him, and he is not open to criticism for adopting it.

But when he goes out of his way to indulge in covert sneers at the advertisers in the medical press generally, and publishes half-disguised expressions of contempt for all physicians who read these advertisements and are induced to buy goods of somebody besides Squibb—then he does deserve criticism, and that in severe terms.

To justify these remarks, we quote the following from the January number of the *Ephemeris*:

"There are a large number of physicians who, for both therapeutics and materia medica, depend largely—if not mainly—upon the traveling salesmen and their pamphlets and lists, and on the advertising pages of the medical journals. The relations of this class to their supplies is most simple and most favorable. They come in very direct and very close contact with the sources of their supplies, and have much less trouble than any other class of artisans. *With others smarter, more ingenious, and more plausible than they, to think for them*, and then to apply vigorous mercantile principles to their wants thus suggested for them, *they have the least practicable amount of thinking for themselves to do*, in regard to their remedies and the novelties of the day, and therefore, as they argue, more time to think of and study out their cases. To this class the ready-made prescriptions in the form of beautifully colored and coated pills, or palatable solutions and mixtures, do not appeal simply as gratifying various degrees of laziness, or indisposition to think for themselves, but they present themselves as true labor-saving devices, skilfully prepared for the over-worked ability to use them, and as giving more time for the higher and more scientific reaches of the profession."

The words we have italicised are as deliberate an insult to the intelligence of the profession of the United States as we remember to have read. They are false in spirit and in letter, and for Dr. Squibb, who has amassed his large fortune by the favor of his profession, thus to turn upon it, is not creditable to him in his latter years.

Is he losing the market for his products, that he turns thus bitter? Does he forget that to travel about to medical society meetings and read papers about the drugs he has for sale is just as much advertising as to take a page in the *Record* or the REPORTER? Dr. Squibb has received a great deal of gratuitous advertising in medical journals; he has been smart enough to get to windward of a good many medical editors; let him not display ingratitude for what the medical press and the medical profession have done for him.

NOTES AND COMMENTS.

Waking Numbness.

Dr. Andrew H. Smith, in the April number of *The American Journal of the Medical Sciences*, describes, under this title, a heretofore undescribed neurosis, and reports four cases—from a study of which it appears that the numbness is something added to the normal condition. It is a purely subjective condition. There is no paralysis of motion or sensation, the tactile sense is unimpaired, there is no change in the temperature of the affected part, the surface is not blanched or mottled, there is no tenderness on pressure. These characteristics separate this condition widely from those known under the names of night-palsy, local asphyxia, digiti mortui, Raynaud's disease, erythromelalgia, and from the various paræsthesias and acroneuroses heretofore described.

Doubtless the conditions upon which the numbness depends are present during sleep, but the sensation is not sufficiently strong to arouse the sleeper, and he first becomes conscious of it when awakened by some other cause.

The cause of this condition is probably central, since the effect is usually symmetrical. It would seem to be connected with the lowering of the circulation which takes place during sleep, and to disappear when the circulation returns to the waking condition, whether the return be spontaneous, or the result of rubbing, etc. As to the latter, it is doubtful whether it has any other effect than that upon the general circulation which the muscular exertion would necessarily produce.

As for treatment, in the only case in which the condition existed by itself, and independently of more serious conditions, ergot, digitalis, strychnia, and aconite, were tried at different times, but without result. The inconvenience produced by the affection was so slight that no treatment was carried out efficiently, so that even these negative results were of no value. In each of the other cases there was a diseased condition present, to which the numbness was subordinate, and which afforded the indications for treatment. In proportion as the treatment of the underlying condition was successful, the numbness disappeared. If it be true that the cause is central, no local treatment is likely to be of service.

Inoculation as a Preventive of Yellow Fever.

Dr. Bustamente, of Cucuta, Colombia, says of this subject:

"Dr. Urricoechea, surgeon of the frontier battalion, inoculated, by way of experiment, and with good results, five of his soldiers. Twenty minutes after the operation the temperature gradually ascended to 40° C., accompanied with all the symptoms of yellow fever. This lasted forty hours, at the expiration of which had disappeared the fever and all attendant symptoms. This operation was effected in a place called Moras, three leagues from Cucuta, and where a body of troops were stationed, who have not come to this city for fear of the fever. At present the inoculated soldiers are here, exposed to the action of the focus of infection. As in Moras, no case of the epidemic has as yet presented itself." Dr. Bustamente, in his letter, states that "as my labors in the field of inoculation as a preventive of yellow fever are only, it may be said, mere experiments, which, although they may satisfy me with a well-founded hope of successful and complete result, cannot be of genuine utility until the best and most efficacious method is decided upon. I am thinking, however, of making an abstract of my observations, together with the method pursued, the results obtained, and everything that may be useful in the premises. For the present I will confine myself to the statement that in more than forty persons whom I have inoculated, a fever, with many of the characteristic symptoms of yellow fever, has presented itself; this fever, developed by inoculation, varying several tenths of a degree, and in some cases ascending to 41° C., but never presenting the most grave symptoms of yellow fever. The result of my observations permits me to state positively that the fever produced by inoculation is attended with no danger, and it is safe to inoculate, as I have already done, from children of two years of age to the oldest individuals. Many of the persons inoculated have come to this city, and in no case has the yellow fever attacked them, which gives me hope of a final result completely satisfactory. The municipality, assisted by the merchants, sent to Mexico, January 10, a commission composed of two physicians, in order to study the inoculation of the fever."

Intussusception Produced by the Presence of a Tumor Growing from the Mucous Membrane of the Transverse Colon.

Mr. Arbuthnot Lane described this before an English Medical Society. After an attack of diarrhœa, in a chronic case of hip-joint disease in a child æt. eight, a tumor as large as a walnut was found projecting from the anus. It was much congested, blood oozed from its surface. The nurse in attendance supposed it to be a prolapse of the mucous membrane of the rectum, and attempted to return it within the anus, but was unsuccessful. On examination, the tumor appeared to have a very long pedicle, which gradually increased in thickness, extending beyond the reach of the finger. As there were no symptoms of strangulation and as the length of the pedicle was doubtful, he returned the tumor within the rectum. It soon passed out of reach. On the following day the tumor could be felt in the middle line, between the umbilicus and symphysis, between the finger in the rectum and the hand on the surface of the abdomen. Some days after, during another attack of diarrhœa, the tumor was again extruded from the anus. On this occasion it was found that the tumor was

sessile, and that it was attached to the very congested mucous membrane by a constricted neck, the prolapse of gut being abundant and lax, so that on the first occasion the whole of the thin apparent pedicle must have been formed by mucous membrane and the intestine itself. On the removal of the tumor, the prolapsed gut was readily replaced above the pelvic brim by the finger, and examination on subsequent occasions showed no signs of an intussusception. No tumor could be felt in the abdomen on either occasion in which the growth projected from the anus.

Congenital Occlusion of the Pharynx.

A Spanish practitioner, Don M. D. Illera, gives in *El Siglo Médico* an account of a case in which a newly-born child could not be taught to suck, and whose mouth on the introduction of the finger grasped it like a ring. On inspection, the middle third and edges of the tongue were found to be connected to the superior alveoli by firm adhesions, which entirely prevented the organ from being depressed. In addition to these adhesions, two little tumors were seen on the palate near the arch of the fauces, which almost occluded the passage into the pharynx, thus rendering swallowing of liquids almost impossible. It was evident, therefore, that unless operative measures were resorted to, the child must necessarily succumb very shortly from sheer inanition. The parents, however, though the state of the case was laid before them, refused to permit of an operation till the fourth or fifth day, when they decided to allow it. Don Illera seized the tumors with forceps, and cut them off at the base, touching the bleeding surface immediately with the actual cautery. The adhesions were then divided, and after the application of a sponge with cold water for a few hours, repeated very frequently, the child was able to swallow some milk quite easily, and ultimately attained complete use of the tongue. Don Illera was induced to publish the case, as he once saw a similar case in which the practitioner in attendance had considered the risk of operation too great to be attempted.

Inherited Congenital Deformity of the Hands and Feet.

Before the Clinical Society of London, Dr. H. B. Robinson read notes of a case in which a plastic operation had been done on the feet. The patient was a child, æt. 3½. The two inner toes were coalesced into a single great toe, and the three outer toes were similarly united into a little toe; the coalescence extended in part into the metatarsal bones, and there was a wide and deep cleft between. The operation consisted in removing the skin from the contiguous parts of the cleft, and then uniting the edges after the toes had been pressed together. A more shapely and more sightly foot was thus obtained. The child was one of several who suffered from a similar deformity, and her mother, herself affected, feeling the inconvenience of such a foot, had taken her to the hospital to see whether something could not be done to remedy the defect. The author showed a family tree, from which it could be seen that the deformity affected three generations. The first to suffer was the child's grandmother, and of thirty-six lineal descendants sixteen were malformed. The malformation was perpetuated through the female branches of the family. It was singularly uniform in its manifestations, and was attributed originally to a fright. The patient and several members of her family were exhibited.

Brachial Monoplegia Complicating Enteric Fever.

A male, æt. 22, came under the observation of Dr. Archer (*Med. Press*) at the beginning of the second week of enteric fever. The case was a severe one, and was marked by absence of diarrhœa; there was also delirium and picking at bedclothes, and occasional profuse sweatings. On the fifteenth day numbness was first noticed in the right arm. This was accompanied by general sweatings and considerable prostration. The affection of the arm progressed until the limb and hand became almost completely paralyzed. For several days there was great hyperæsthesia and a burning sensation complained of in the limb. This was followed by rigidity of the elbow-joint, which became fixed at a right angle, and any attempt to straighten it caused considerable pain. The muscles were considerably atrophied. Improvement was gradual, and on the patient's discharge, about the ninth or tenth week from the onset of the fever, the limb had not recovered all its movements, and there was some atrophy remaining. Dr. Archer drew attention to the extreme rarity of these local paralyses in enteric fever, and remarked that when such complications do occur in the acute specific fevers, they are usually observed during the period of convalescence, and not in the acute stage.

Epilepsy Due to an Old Blood Cyst.

On the 22d of February (says the *Med. Press*), Mr. Kendal Franks operated in the Adelaide Hospital on a man, æt. 25, who had been subject to epileptic attacks for four years, the result of a fall of nine feet on the top of his head, in 1879. Part of the frontal and parietal bone on the left side had been depressed by the fracture. Immediately after the accident the patient had been unconscious for three weeks, but subsequently he had suffered no ill effects until the epileptic attacks came on, six years later. These recurred about once a month, although sometimes he had five or six a month. Under the use of bromides continued for a year and a half, he once had an interval of three months. Mr. Franks trephined the skull immediately behind the left frontal eminence, and on opening the dura mater discovered a cyst the size of a large walnut beneath it, with a corresponding depression in the brain. The cyst contained serum, and an old blood clot. This was evacuated, cleaned out, and drained. The patient recovered rapidly, and was allowed up on the twelfth day. Since the operation, he has had no return of the epilepsy. The full returns of this interesting case will be published when sufficient time has elapsed to judge of the permanency of the cure.

Infecting Whitlow.

Dr. Estéban Borrero Echevarria, writing in the Havana medical journal *La Enciclopedia*, mentions the case of a young woman of twenty-three, badly nourished and ill developed, appearing like a girl of sixteen, who had a whitlow commencing in the middle joint of the middle finger of the left hand, which, being neglected, went on to produce caries of both the distal phalanges, with serious deformity of the finger. In about two months after the commencement of this whitlow another formed in the second and third joints of the ring finger of the right hand. She then presented herself for treatment. Dr. Echevarria promptly opened the whitlow down to the bone, and this healed satisfactorily; however, in about a fortnight a third whitlow formed in the ring finger of the left hand. This was also opened. These three whitlows were all quite idiopathic. The writer does not attempt to explain the succession of these inflammations, but suggests that they may be considered as all due to a general vice affecting the whole system, or to infection through unnoticed abrasions of the skin by pus. Some, he says, may consider the case as one of infectious osteo-myelitis, but at all events he gives the facts as showing the existence of osseous panaris (*panadizo óseo*).

Decoction of Mallow in Leprosy.

Lepra maculosa is not universally recognized as a separate form of leprosy, entirely distinct from the tubercular and anæsthetic varieties. It is, however, considered to differ from these by Mexican physicians, two of whom, Drs. Lucio and Alvarado, have written a good deal on the subject. Quite recently it has been stated that a cure has been found for this form, Drs. Velasco and Egea having each successfully treated a very severe case in a hospital in Mexico (*Gaceta Medica de Mexico*). The remedy was very simple, and was suggested by Don Joaquin Rodrigues, a student, who had seen it used with advantage. I consisted merely of a strong decoction of a malvaceous plant which grows in gardens in Mexico, and is known there as the "ball of fire" (*bola de fuego*). Of this from one to two pints are given daily. In both the cases in which it was given a marked improvement rapidly occurred, recovery with cicatrization of enormous ulcers taking place in about four weeks. It is worthy of remark that these two patients, the one a man, the other a woman, were not in isolated buildings, but occupied beds in the general wards of the hospital, the authorities apparently disbelieving in the infectious character of leprosy.

Parencephalus.

Mr. Stocks showed a girl, aged 16½, to an English medical society, whose height was 40 inches, and who weighed 35½ pounds in her clothes. During her intra-uterine life her mother had good health; both her parents were healthy. Since her fourth year she had grown very little. She had had measles, and what was said to be typhoid fever. Her intellect was about on a par with the development of her body; sometimes she would talk and at others not. She straddled in her walk, and had a tendency to walk on her toes. Her temporary teeth were shed in the usual manner, but had been replaced only by the incisor, canine, and first lower molar on the right side. There were no indications of puberty, save a slight development of the hips. She could tell her letters and spell short words. She occasionally became cyanotic, though there were no apparent cardiac lesions. Her development appeared to have been arrested when about

five years old. Her head was 19 inches in circumference.

Dr. Ross pointed out that the tendon reflexes were very marked, as well as ankle clonus, and that the case was one of parenphalus.

Retention of Placenta for Twenty-two Months.

Dr. Rangé reports in the *Journal des Layes-Femmes*, January 1, 1887, the following case: A woman, thirty years of age, primipara, had a miscarriage in September, 1879, at the second or third month of pregnancy, followed by severe and repeated hemorrhages. No doctor was called in, and little is therefore known of the circumstances or causes of the accident. The hemorrhage continued for some time, gradually getting less, and ceased entirely for four months, reappearing in April, 1880. Since that date the patient suffered constantly from severe abdominal pains, with red and white discharges, and a deranged state of the bowels. Matters mended to some extent, and the patient thought she was getting well again, when, in July, 1881, she was seized with labor-pains, and in two hours was delivered of a placenta in a state of putrefaction, about the size of the closed fist. She made a tedious but perfect recovery. This patient had had no marital intercourse since her miscarriage, and no doubt is therefore possible as to the reality of the placental retention having lasted twenty-two months.

Fracture of the Internal Epicondyle Treated with Splints.

Dr. G. T. Loomis, of Minneapolis, Minn., reports the following case to the *Med. Record*:

"H. D., aged nine, was thrown forcibly upon the ice, striking his elbow, and was brought immediately to my office. He was suffering severe pain about the internal condyle, which was increased by any attempt at extension, although the latter could easily be done. The arm was semiflexed, the point of the condyle being displaced downward one-half inch, and could be moved easily in any direction. I flexed the arm and reduced the displacement easily, and applied a bandage firmly, the arm being held in a sling. No pain and little swelling next day. The dressing was left in position one week, and the arm could then be extended about one-half. The bone remained in position. Passive motion was made nearly every day for four weeks, the arm swinging at the side without bandage. At the present time, two months after the accident, the boy can extend and flex the arm nearly as well as ever."

Quinsy.

Dr. Easby recently read a paper before an English medical society on quinsy and its treatment. After speaking of the old method of antimonials, free purgation, complicated gargles, leeches and blisters, Dr. Easby advised the use of aconite given after Dr. Ringer's method, or from ten to fifteen grains of salicylic acid or salicylate of soda given every two hours, which had invariably afforded speedy relief. Gargles were strongly condemned as both useless and cruel to the patient. As a local application, a powder consisting of equal parts of tannin and iodoform puffed on to the swollen tonsils he had found give great relief to the pain.

Dr. Latham agreed that gargles were useless, and advised the use of the spray, chlorine water, or some antiseptic. It was especially useful for children. He strongly endorsed Dr. Easby's remarks on giving salicylic acid and salicylate of soda in the early stage, more especially if there was any association of rheumatic symptoms.

Intra-uterine Amputation of Forearm.

Before an English Medical Society, Mr. Street said that A. B., aged twenty-two, a healthy young woman, was first seen by him when suffering from inflammation of the left olecranon bursa. From an inch below the elbow the limb is wanting, and the stump presents all the appearance of an intra-uterine amputation. On inquiry he found that she was born with this deformity; the stump was quite healed at birth, and no evidence of any remains was to be found. The cicatrix is very small, being only three-quarters of an inch long, and the skin is very little puckered around it; it is not adherent to the deeper parts. The bones of the forearm can both be distinctly felt, and the olecranon seems almost equal in size to the right one. The humerus and muscles of the left arm are no smaller than can be accounted for by not being so much used as the right arm. There is no history of syphilis in the mother, nor was any accident remembered during gestation.

Rhinitis with Spasmodic "Snorting."

Mr. Spencer Watson read notes before an English medical society of a case in which a young woman, aged 26, after a great men-

tal shock, was seized with spasmodic inspiratory "snorting," very frequently repeated. This soon became uncontrollable, and continued for many months, in spite of treatment, the spasm coming on sometimes every half-hour and sometimes every ten minutes during the day, ceasing, however, during sleep. Large doses of bromide were given with temporary good effect; but, on their being discontinued, the "snorting" soon recurred with its original intensity. On rhinoscopic examination, Mr. Watson discovered great thickening of the turbinated bodies, which were partially removed with very good effect. Subsequently, nasal plugs were used, and the nostrils were freely sponged with hazeline. The "snorting" had not recurred since the last operation (in January, 1887), and the smell and taste, which had been much impaired, were now perfect. The geueral health had also improved.

Mumps and Peripheral Neuritis.

Many diseases not strictly speaking of nervous nature have now been found to be associated with peripheral neuritis. Phthisis, typhoid fever, diphtheria, and other febrile diseases, are the best known of these. Mumps may be added to the list on the authority of M. Joffroy. The paralysis that occurred in Joffroy's case affected all four limbs. The legs, as usual were first affected. Lancinating pains preceded the paralysis. The deep reflex actions were abolished. The muscles gave the reaction of degeneration when tested with the faradaic and voltaic currents. The muscles appeared to be increased in sensitiveness, for slight pressure caused pain. The paralysis was observed first three weeks after the onset of the mumps. Is it necessary to ask whether the case was one of true mumps? Mumps is certainly complicated and sometimes followed by cerebral paralysis. In M. Joffroy's case the paralysis endured for four months. Iodide of potassium was the medicament administered.

Inhalations of Oxygen in Eclampsia.

Lvoff (*Journal de Medecine*, January 2, 1887,) describes the case of a primipara who was attacked with eclampsia at the beginning of labor. Delivery was effected with forceps; but the attacks continued, although chloroform and chloral were given. Inhalations of oxygen were then prescribed; but, in spite of this, the symptoms grew more serious, the attacks became more frequent, and the respiratory stertor increased. The patient was cured by subcutaneous injections of hydrochlorate of pilocarpine. Nevertheless, M. Lvoff recommends inhalations of oxygen in such cases, because, as he asserts, eclamptic attacks stand in direct relation to the accumulation of carbonic acid in excess and the want of oxygen in the blood, the latter circumstance being the cause of the diminished circulation, the greater arterial tension, and the disturbance of the circulation or nutrition of the nerve-centres.

Foreign Body in the Nose.

Dr. Hunt relates two cases in a foreign exchange. The first was that of a boy, æt. 4, who for eight months had had a fœtid discharge from the nose. On careful examination, the right nostril was found to be obstructed by a foreign body, which on removal proved to be a cherry-stone. The second case was somewhat similar, except that the offending body was a plum-stone, which was removed by forceps. He laid down the rule that in all cases of fœtid discharge the nasal cavity should be examined by the speculum (a bent hairpin, or two bent hairpins, formed a most effective speculum, not unlike Baber's). In case of a foreign body being present, it should not be removed by a current of water injected up the other nostril; this might get dammed up, and damage the middle ear. Cocaine was doubly useful; it not only acted as an anæsthetic, but it also reduced vascular turgescence.

Injury to Shoulder.

Before an English medical society Mr. A. F. Clay showed a man, aged 77, who had fallen down stairs on his shoulder; he was told by his medical attendant that he had "broken his arm high up." Three weeks after this, Mr. Clay saw him, and found his humerus and clavicle intact; but, about an inch and a half above the lowest part of the anterior boundary of the axilla, a round, hard prominence, the size of a marble, was seen and easily felt. It was slightly movable, but more in the lateral than the vertical direction. It followed the movements of the humerus. Since then it had become absolutely immovable, and was smaller. The coracoid process on the injured side was not so prominent as its fellow.

Warts—Remedy For.

Warts are amongst the petty annoyances of life (says the *Med. Press*), and few are capable of submitting to the annoyance with the

equanimity of "Old Noll." Amongst the latest remedies for the growth is the addition of 15 grains of corrosive sublimate to an ounce of collodion, and with this sublimated collodion the wart is to be brushed once daily. *Zeitschrift d' Oester. Apotheker*, v. A more safe and equally efficacious application is a saturated solution of the carbonate of sodium, common washing soda. After many trials, I have found it superior to all other remedies for removing warts.

The Aniline Treatment of Phthisis.

Dr. Kremianski's idea of curing tuberculosis by converting the blood into a dilute solution of aniline (see the *Lancet*, March 5,) has been tried by Dr. Nesteroff on a patient who was about to be sent to the south, with the result that he became rapidly worse and died in a fortnight. The Moscow Medical Society, before whom the matter was brought, were nearly unanimous in the opinion that the aniline treatment would be not merely useless, but positively dangerous.

The Gonococcus in Gonorrhœal Arthritis.

Dr. P. V. Smirnoff has examined the seropurulent fluid aspirated from the inflamed knee-joint of a patient, aged twenty-eight, in whom arthritis had developed about a month after his contracting gonorrhœa. Numerous groups of Neisser's microbes were found within the pus-cells. Hence the author comes to the same conclusion as Petrone, Kemmerer, and M. I. Afanasieff—that is, that the articular inflammation is caused by the gonococci entering the blood.

Excision of the Entire Clavicle.

Dr. John Sloan reports in the April number of *The American Journal of the Medical Sciences* a successful case of excision of the entire clavicle for central carcinoma in a boy aged fourteen years. Four months later there was evidence of the return of the cancer in the line of the cicatrix and in the glands of the neck.

Anal Fissure.

A one-in-fifty solution of chloral hydrate in water applied on a rag to the fissure immediately after the morning stool, is recommended by Dr. Crequy, in the *Therapeutic Gazette*. Its action as a stimulant to granulations, and as a local antiseptic, makes it very suitable in such cases.

Correspondence.

Puerperal Convulsions after Miscarriage.

Eds. Med. and Surg. Reporter:

On December 20, 1886, I was called to see Mrs. I. V., aged 20, primipara. Blonde, of small stature, but rather fleshy. Mother died in a convulsion some years ago. Symptoms: headache, pains in back and lower bowels, and wasting. I prescribed ergot for wasting, brom. pot. for headache, and to take 20 drops tr. opii for the pains every one and a half hours till easy. I heard no more of the case until December 31, a. m. She was taken in labor and delivered of a dead male child, partly decomposed. The placenta came away all right. I left her about noon, doing, I thought, as well as any woman I ever delivered. At 1:45 her husband came and said she had had a fit, and was dying. When I arrived she was rational; could talk; said her head hurt and she was sleepy. Pulse 130, face flushed, feet cold. I gave her 30 grains bromide of potash and 5 drops Norwood's tr. verat. viride, and applied mustard to feet. Slept till 2:30 p. m. Vomited and had another convulsion. As soon as she could swallow, I gave her 30 grains hyd. chloral, and went after my hypodermic syringe. She slept until 3:15 p. m. Vomited, and had a harder convulsion than before. I then gave hypodermically sul. morphia gr. ½, verat. viride, drops 5. She slept until 4 p. m. Vomited and had a fourth convulsion. Before it was entirely off, I gave her hypodermically sul. morphia gr. ¼, verat. viride N. drops 10. She rested until 6 p. m. Vomited, and had a convulsion, and I repeated the last injection. She slept until about 10 p. m. Woke up and asked for water, and tried to vomit. I then gave her 30 gr. bromide of potash, to be repeated if very wakeful. Rested well through remainder of the night, and slept nearly all the next day. January 1, 1887, at 6 a. m., I gave a dose of comp. cath. pills. This, the seventh day of January, 1887, and eighth day of sickness, she is able to sit up in bed. I did not have a chance to examine the urine.

S. R. Humston, M. D.

Smithville, Ind., January 7, 1887.

A New Departure.

Eds. Med. and Surg. Reporter:

The Board of Governors of the Maternity Hospital have unanimously determined that the vacancy now existing in the visiting obstetrical staff of the Hospital should be filled

by a competitive examination. Dr. Edward L. Duer, Dr. Wm. Goodell, and Dr. W. H. Parish have consented to conduct the examination.

Those desiring the position must apply by letter before the 1st of May to Dr. Edward L. Duer, 1704 Arch street, Chairman of the Committee, and soon after that date the applicant will be notified of the place where and time when the examination will be held.

J. V. INGHAM,
Chairman of Executive Committee.
Philadelphia, April 18, 1887.

NEWS AND MISCELLANY.

The Fifty-two Years' Plague.

The *Lancet* says, according to Procopius, "the Byzantine Herodotus," the plague began A. D. 542 in the Nile delta at Pelusium, and dividing its forces it attacked Alexandria and the rest of Egypt on the one hand, and Palestine on the other. Beginning always on the sea-shore, it penetrated inland, depopulating islands, caverns, hill tracts—wherever, in short, human beings were found. In its second year it invaded Byzantium in the middle of spring. Many of its victims felt themselves struck in some part of the body, when, by way of exorcising the assailant, they would utter some sacred word and hurry into the nearest temple. To escape the importunities of friends, others, again, would barricade themselves in their rooms and plug their ears so as not to hear the loud knocking at their doors. A feverish malaise arousing them from sleep or arresting them in their walk or at their work was the first symptom; but there was no change of color, or sense of burning heat, or inflammatory affection, so that in the evening neither patient nor physician was alive to any danger. But many on the same day or the day following, or a considerable time thereafter, saw a bubo rising on the groin, or in the armpits, or on the parotids, or in other regions, and this symptom was common to every sufferer from the disease. Somnolence, stupor, or acute delirium were often present, with forgetfulness of every call of nature, so that many who happened to be without attendants died of hunger. Contact with patients or with the dead gave the malady neither to physician nor to sexton, while many—they did not know why or how—were attacked and succumbed in a few hours. Patients flung themselves into the sea or from high places in anticipation of death, while in others the bubo, not preceded by visions of delirium, passed into gangrene, and they died in convulsive agony. The physicians, suspecting these plague ulcers to contain a poison which caused the disease, opened them in many dead subjects, and found them to contain a large carbuncle. Those cases in which the body was covered with black pustules, the size of a lentil, died within twenty-four hours, while others vomited blood till death relieved them. Errors in prognosis were infinite, able physicians foreseeing death where marvellous recovery supervened, and predicting recovery just before fatal collapse. Therapeutics were equally at fault. The bath was of use in some cases; worse than useless in others. It was quite as ineffectual to fly from the disease as to treat it—such was the ignorance as to its origin or its issue. Those in whom the bubos proceeded to copious suppuration got well, as with the defervescence of the carbuncle the signs of returning health revealed themselves. Recovery was not always, however, complete, the survivors being often afflicted with semi-paralysis of the tongue, impairing distinctness of articulation for life. In Byzantium the plague lasted four months, during three of which it was at its maximum, when the mortality reached 10,000 daily, till the city seemed deserted. Other details confirmatory, with few exceptions, of the powerful description by Procopius fill in the sombre picture, and must be drawn from the histories of Agathias and Evagrius. Gibbon, in his condensation, followed with greater authority by De Renzi, contests the dictum of Procopius that the disease was non-contagious, an epithet scarcely applicable to a visitation which passed from country to country, beginning at the seaports and penetrating inland. Another point indicated by De Renzi is the evidence deducible from Procopius that the Byzantine physicians practiced morbid anatomy and sought out the causes of disease by pathological research: "Even the Christians of the sixth century did not hold the dead subject to be so intangible as not to afford to science the means of exploring the structure of the body, and so of aiding anatomy" ("Scuola Salernitana," vol. i., p. 31).

Foreign University Intelligence.

Basle.—Dr. Fehling, Director of the Stuttgart School for Midwives, has been appointed Professor of Midwifery.

Berlin.—Professor Karl Möbius of Kiel will take up the duties of the chair of Zoology after Easter.

Bordeaux.—M. Blarez (*agrégé*) has been appointed Professor of Chemistry.

Cracow.—Professor Hofmokl, of Vienna, has refused the invitation to Cracow on account of the wretched condition of the surgical clinic. The names of Drs. Rydygier and Obalinski are now mentioned in connection with the vacant surgical chair.

Giessen.—Dr. Spangel, Director of the Town Museum of Natural History, has been appointed Professor of Zoology.

Helsingfors.—Dr. Holsti has been appointed Extraordinary Professor of Internal Pathology, and Dr. E. Sundvik Extraordinary Professor of Physiological Chemistry and Pharmacology.

Innsbruck.—Dr. Borysiekewicz, of Vienna, has been appointed Professor of Ophthalmology.

Lyons.—M. Laroyenne, who takes one of the gynæcological courses, has been appointed Professor-adjoint. M. Perroud, who takes one of the courses on children's diseases, has also been appointed Professor-adjoint.

Munich.—Dr. Karl Schloesser, Assistant in the Ophthalmic Clinic, has become *privat docent.*

Nancy.—M. Hergott (*agrégé*) has been appointed Professor of Midwifery. M. Spilmann (*agrégé*) has been appointed Professor of Clinical Medicine.

Rouen.—Professor Duménil has been appointed Director of the Preparatory School of Medicine.

Tomsk.—The Medical and Physico-Mathematical Faculties of this the new Siberian University are to be opened this year.

Toulouse.—M. Charpy has been appointed Professor of Anatomy, in succession to M. Bonamy, deceased.

Vienna.—Professor Max Gruber, of Graz, has been appointed Extraordinary Professor of Hygiene. It has been decided that the vacation courses are only to be open to foreign medical men in cases where the full number of the classes is not made up by Austrians. This may prove rather a serious matter for some of the English and Americans who frequent the Vienna Hospital for the short courses, for which it is famous.

Würzburg.—Dr. Matterstock has been selected by the Senate as successor to Professor Geigel, the recently deceased Professor of Medicine.

Peculiar Legal Evidence.

A young woman of Mercer county, Pa., swore out a warrant for the arrest of a man, claiming that he had choked her, and had almost dislocated her left wrist by twisting it. She was in the ninth month of pregnancy, and although the discharge of the defendant was looked for, owing to the absence of witnesses, the birth of the babe revealed what the justice considered sufficient evidence to convict the man on. The child showed the marks of a thumb and fingers about the throat, and the left wrist was twisted and swelled, as if from a sudden wrench. The *Med. News*, in commenting on the case, says:

"On general principles, we should say the judge should not have admitted the baby as testimony, and certainly no man should be convicted on such trashy evidence as is afforded by ordinary birth-marks."

The Profession in Austria and the Government.

The Austrian Medical Association, now comprising 4,500 members, recently held itseventh annual meeting at Innsbruck, and resolved to petition the Government to make vaccination obligatory throughout the empire by imperial statute, also to restrict the privilege of private practice to medical men who have already served in a hospital. The Association expressed an opinion that considerable changes were desirable in the regulations concerning the training of medical students; and, lastly, a request was preferred that a law should be made assigning substantial pensions to the widows and orphans of medical men who might meet with their death through attending to their duties during an epidemic.

The Title "Doctor."

An official decision regarding the printing of the title "doctor" on United States stamped envelopes, postals, etc., has recently been rendered. A physician of New York city ordered one thousand stamped envelopes printed with the prefix "Dr." before his name. The New York post-office refused to allow the prefix to be used, holding that it advertised his calling. On appeal to the Washington authorities the decision was overruled, and the doctor was allowed to have his envelopes printed as he desired. The decision is manifestly the just and correct one, and we are glad to place it upon record.

American Public Health Association.

The fifteenth annual meeting of the American Public Health Association will be held at Memphis, Tenn., November 8–11, 1887.

The Executive Committee have selected the following topics for consideration at said

meeting: 1. The Pollution of Water-Supplies. 2. The Disposal of Refuse Matter of Cities. 3. The Disposal of Refuse Matter of Villages, Summer Resorts, and Isolated Tenements. 4. Animal Diseases Dangerous to Man.

These topics are exceedingly important, and apply to every section of the United States and the Provinces. Therefore, it is hoped that sanitarians, and others who have had experience and observation in these matters, will give their views to the Association, and through it to the public.

Official Representatives to the International Medical Congress.

Dr. Leopold Servais, of Antwerp, has been appointed by the Belgian Government as representative to the Ninth International Medical Congress (says the *Medical Bulletin*). More recently we learn that the Deputy Surgeon-General, Jeffrey A. Marsten, M. D., of the British army, has been designated a representative by his government; and the Government of France, through the Academy of Medicine, has designated as its representatives Drs. Charpentier, Dujardin-Beaumetz, Léon Le Fort, Trélat, and Vallin. From all directions, at home and abroad, the indications of a very large and brilliant assemblage are of the most gratifying character.

Packer's Tar Soap.

When we say that for years we have used Packer's Tar Soap in our family, and recommended it to numerous patients and friends as the most agreeable soap known to us for toilet purposes, and the most remedial in diseased conditions of the skin, we do nothing more than pay a just tribute to its merits. It is composed of pure materials associated with fresh pine tar, and both for its cleansing and hygienic properties deserves an extensive patronage from the profession and the public.

Another Jubilee.

According to the *Vratch*, on April 17th (29th), Professor S. T. Botkin, of St. Petersburg, celebrated the thirty years' jubilee of his professorship. His colleagues, disciples, and admirers made due preparations to honor the man whose serivces to the Russian medical profession cannot possibly be overestimated.

The Late Professor Schroeder.

An influential committee has been formed in Germany for the purpose of establishing some memorial of the late learned Professor Schroeder. A marble bust to be placed in the University Frauenklinik has been decided on as a part of the memorial, but its further development has not yet been determined.

A Giant.

According to the *Kievlanin*, January 27, 1887, a Greek, a Turkish subject, who recently died of pulmonary phthisis at the Simferopol Town Hospital, was 3 *arshins* and 5 *vershoks* (about seven feet and nine inches) in stature. He slept on three beds laid close together.

Items.

—Dr. Sinclair Coghill, of Great Britain, has been elected a Vice-President of the International Medical Congress, to be held at Washington on September 5th proximo.

—The British Association will this year meet at Manchester, and the session will commence on August 31. Sir Henry Roscoe, M. P., F. R. S., has been elected president.

—Buffalo claims a birth-rate of 31.5 per 1,000 in 1886; Rochester, which is very near, has a rate of 16.66 per 1,000. The *Buffalo Medical and Surgical Journal* says that there is some grave defect either in the vital statistics or in the fecundity of Rochester people.

—Vaccination is, it is stated, to be enforced among all the workmen employed on the coming Paris Exhibition. Each man will be vaccinated as soon as engaged, and the government will not only pay for the necessary medical treatment, but will continue the man's wages should his arm become bad and prevent him from working.

—M. Dupuis, of Brussels, has made a number of observations for the purpose of ascertaining the effect of vaccination on puppies, with special reference to its power of protecting them from the distemper. He found that it was quite possible to inoculate them with vaccine, but that it had no protective influence against distemper.

—It is stated on the authority of Dr. Grawitz, an assistant of Dr. Virchow's, that in as many as one-third of the cases of so-called muscular rheumatism which have been examined post-mortem, the presence of *trichina spiralis* has been demonstrated. In many of these cases the parasites must have been present in the muscles for many years.